

FIGURE 1: NaIIII18 cDNA (SEQ ID NO: 1)

tgaaaagatggcacaggcacttttgttaccccccaggacactgaaagcttcgcctttactaga
gaatctttgtcttatcgaaaaacgtgtcagaagagaaaagccaagaagccccaaaaggaac
aagataatgatgatgagaacaaccaaaagccaaatagtgacttggaaagctggatccctcc
atttatttatggagacattcctccagagatgggtcagagccccctggaggacactggatccctac
tatataataaaaaactttatagtaatgaataaaaggaaaaggcaatttccgattcagtgcac
cctctgccttgcatactttaactccactaaaccctgttaggaaaattgctatcaagattttgt
acattctttattcagcatgttatcatgtcactatttgcaccaactgtgtatttgcacact
agcaaccctcctgactggacaaagaatgttagactacacattcactggaaatcatacccttgc
cacttataaaaaatcttggcaagagggtttgcttagaagatttacgttcttgcgtatccatg
gaactggctggatttgcgttgcattgtatggctatgttaacagaatttgcgttgcgttgc
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tgtgttgcgttgcgttgcgttgcgttgcgttgcgttgcgttgcgttgcgttgcgttgc
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gcacaatggattcaaatggacatttgcgttgcgttgcgttgcgttgcgttgcgttgc
cattggagatgacagtcactttatgtttggatggcaaaaagacccttactctgtggaaat
ggctcagatgcaggccagtgccagaaggatacatctgtgtgaaggctggctgaaaccccaact
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gcagatgcgtcgaacagctaaaaagcaacacaggaagaagctcaggcagttgcggcagcatcag
gttcaagagatttgcgttgcgttgcgttgcgttgcgttgcgttgcgttgcgttgc
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gtccctcatcagtcgttgcgttgcgttgcgttgcgttgcgttgcgttgcgttgc
aacaagcatttcagttcagaggtcggcaaaaggatgtggatctgaaaatgacttgcgtat
gtgaacacagcacattgaagacagcgttgcgttgcgttgcgttgcgttgc
atggagagcgtcaacagtaacgttagtcaggccagtgatgtcatccaggatggccagg
tccagcaaatggaaagatgcacagcactgtggatttgcgttgcgttgcgttgcgttgc
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aatgatgactgtacgtccacccacggtggcacatgaacgcacttccactcatttgc
tatttgcgttgcgttgcgttgcgttgcgttgcgttgcgttgcgttgcgttgc

FIGURE 1 (continued)

FIGURE 1 (continued)

gtaaacaagaggagggtctccgctatcattcagcgtaattcagatgttatctttaaagca
aaggtaaaaaatatatacaagtaactataacaaagaggcaattaaaggaggattgacttacct
ataaaacaagacatgattattgacaaactaaatgggaactccactccagaaaaacagatggga
gttcctctaccacccctcctccatgatagtgtaaacaaaaccagacaaggaaaagttga
gaaagacaaaccagaaaaagaaagcaaaggaaaagaggtcagagaaaatcaaaagtaaaaagaa
acaaagaattatcttgtatcaattgtttacagcctatga

FIGURE 2: NalIII18 amino acid (SEQ ID NO: 2)

MAQALLVPPGPESFRLFTRESLAAIEKRAAEEKAKPKKEQDNDDENPKPKPNSDLEAG
KNLPFIYGDIPPEMVSEPLEDLDPYYINKKTFIVMNKGKAIFRFSATSALYILTPLNPVR
KIAIKILVHSLFSMLIMCTILTNCVFMTLSNPPDWTKNVEYTFGIYTFESLIKILARGF
CLEDFTFLRDPWNWLDGSIVMAYVTEFVSLGNVSALRTFRVLRALKTISVIPGLKTIVG
ALIQSVKKLSDVMILTVFCLSVFALIGLQLFMGNLRNKCLQWPPSDSAFETNTTSYFNGT
MDSNGTFVNVTMSTFNWKDYIGDDSHFYVLDGQKDPLLCGNGSDAGQCPEGYICVKAGR
PNYGYTSFDTFSWAFLSLFRLMTQDYWENLYQLTLRAAGKTYMIFFVLFVLSFYLVNL
ILAVVAMAYEEQNQATLEEAEQKEAEFQQMLEQLKKQEEAQAVAAASAASRDFSGIGGL
GELLESSSEASKLSSKSAKEWRNRRKKRRREHLEGNNKGERDSFPKSESEDVKRSSFL
FSMDGNRLTSDKFCSPHQSSLISRGLFSPPRNSKTSIFSFRGRAKDVSENDFADDEH
STFEDSESRRDSLFPVPHRGERRNSNVSQASMSRMVPGLPANGKMHSTVDCNGVVSLVG
GPSALTSPTGQLPPEGTTETEVRKRLSSYQISMEMLEDSSGRQRAVSIASILTNTMEE
LEESRQKCPPCWYRFANVFLIWDCDAWLKVHLVNLIVMDPFVDLAITICIVLNTLFMA
MEHYPMTEQFSSVLTGVNLVFTGIFTAEMVLKIAMDYYYYFQEGWNIFDGIIVSLSLME
LGLSNVEGLSVLRSFRLRVFKLAKSWPTLNMLIKIIGNSVGALGNLTIVLAIIVFIFAV
VGMQLFGKSYKECVCKINDDCTLPRWHMNDFFHSFLIVFRVLCEWIETMWDCMEVAGQT
MCLIVFMLVMVIGNLVVNLFLALLLSSFSSDNLAATDDNEMNNLQIAVGRMQKGIDYV
KNKMRECFQKAFFRKPKVIEIHEGNKIDSCMSNNTGIEISKELNYLRDGNGTTSGVGTGS
SVEKYVIDENDYMSFINNPSLTVTPIAVGESDFENLNTEEFSESELEESKEKNATSS
SEGSTDVVLPREGEQAETEPEEDLKPEACFTEGCIKKFPFCQVSTEEGKGKIWNLRKT
CYSIVEHNWFETFIVFMILLSSGALAFEDIYIEQRKTIKTMLEYADKVFTYIFILEMLLK
WVAYGFQTYFTNAWCWLDFLIVDVSLVSLVANALGYSELGAIKSLRTLRLRPLRALSRF
EGMRVVVNALVGAIPSIMNVLLVCLIFWLIFSIMGVNLFAGKFYHCVNMTGNMFDISDV
NNLSDCQALGKQARWKNVKVNFDNVGAGYLALLQVATFKGWMIDMYAAVDSRDVKLQPVY
EENLYMYLYFVIFIIFGSFTLNLFIGVIIDNFNQQKKFGQDIFMTEEQKKYYNAMKK
LGSKKPQKPIPRPANKFQGMVFDVTRQVFDISIMILICLNMTMMVETDDQGKYMVLV
SRINLVFIVLFTGEFVLRLVSLRHYYFTIGWNIFDVVVILSIVGMFLAEMIEKYFVSPT
LFRVIRLARIGRILRLIKGAKGIRTLLFALMMSLPALFNIGLLLFLVMFIYAIIFGMSNFA
YVKKEAGIIDDMNFETFGNSMICLFQITTSAGWDGLLAPILNAPPDCDPDTIHPGSSVK
GDCGNPSVGIFFFVSYIIISFLVVVNMIVAVILENSVATEESAEPSEDDFEMFYEVWE
KFDPDATQFIEFSKLSDFAAALDPPLIAKPNKVQLIAMDLPVMSGDRIHCLDILFAFTK
RVLGESGEMDALRIQMEDRFMASNPSKVSYEPIITTLKRKQEEVSAIIQRNFRCYLLKQ
RLKNISSNPKAIKGRIDLPIKQDMIIDKLNGNSTPEKTDGSSSTTSPPSYDSVTKPDK
EKFEKDKPEKESKGKEVRENQK

**FIGURE 3: cDNA sequence of human SCN3A of Clare et al.
(SEQ ID NO: 3)**

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1 taccctaacc atctggatg ctgggcttg ttatgctgtt attcataagg ctctgttttta
61 tcagagatta tggagcaaga aaactgaagc caagccacat caaggtttga cagggatgag
121 atacctgtca aggattcata gtagagtggc ttactggaa aggagaaaag aatctttct
181 agggatattt taagaataaa tgagataatt cacagaaggg acctggagct tttccggaaa
241 aaggtgctgt gactatctaa ggtaattcgt atgcaagaag ctacacgtaa ttaaatgtgc
301 aggtgaaaaa gatggcacag gcactgttgg tacccccagg acctgaaagc ttccgcctt
361 ttactagaga atctttgtc gctatcgaaa aacgtgctgc agaagagaaa gccaagaagc
421 ccaaaaagga acaagataat gatgatgaga acaaaccaaa gccaaatagt gacttggaaag
481 ctggaaagaa ccttcattt atttatggag acattcctcc agagatggtg ttagagcccc
541 tggaggacat ggttcctac tatacaata agaaaactt tatagtaatg aataaaggaa
601 aggcaatttt ccgattcagt gccacctctg cttgtatata tttaactcca ctaaacccctg
661 ttaggaaaat tgctatcaag attttgtac atttttattt cagcatgctt atcatgtgca
721 ctatttgac caactgtgtt tttatgaccc ttagcaaccc tcctgactgg acaaagaatg
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901 tcattgtgat ggcgtatgtt acagaatttgc taagccttagg caatgttca gcccttcgaa
961 ctttcagagt cttgagagct ctgaaaacta tttctgtat tccaggtttt aagaccatg
1021 tggggccctt gatccagtcg gtaaagaagc tttctgtatgt gatgatcctg actgtgttct
1081 gtctgagcgt gtttgccttc attgggtctgc agctgttcat gggcaatctg aggaataaat
1141 gtttgcagtg gcccccaagc gattctgtt ttgaaacccaa caccacttcc tactttatg
1201 gcacaatggg ttcaaattggg acatttgcata atgtaacaat ggcacatcc aactggaaagg
1261 attacattgg agatgacagt cactttatg tttggatgg gaaaaaagac ctttactct
1321 gtggaaatgg ctcagatgca ggccagtgcc cagaaggata catctgtgtg aaggctggc
1381 gaaaccccaa ctatggctac acaagcttgc acacctttag ctggccttcc ctgtctctat
1441 ttgcactcat gactcaagac tactggaaa atctttacca gttgacatta cgtgctgtc
1501 gaaaaacata catgatattt tttgtctgg tcattttctt gggctcattt tatttggta
1561 atttgcattt ggctgtggg gcatggctt atgaggagca gaatcaggcc accttggaaag
1621 aagcagaaca aaaagaggcc gaatttcagc agatgctgca acagttaaa aagcaacagg
1681 aagaagctca ggcagttgcg gcagcatcag ctgcttcaag agatttcagt ggaatagggt
1741 ggttaggaga gctgtggaa agttcttcag aagcatcaaa gttgagttcc aaaagtgcata
1801 aagaatgggg gaaccgaagg aagaaaaagaa gacagagaga gcaccttgaa gggaaacaaca
1861 aaggagagag agacagcttt cccaaatccg aatctgttca cagcgtcaaa agaagcagct
1921 tcctttctc catggatggg aacagactga ccagtgcacaa aaaattctgc tccccctcatc
1981 agtctctttt gatgtccgt ggctccctgt tttccccaag acgcaatagc aaaacaagca
2041 ttttcagttt cagaggtcggtt gcaaaaggatg ttggatctga aaatgacttt gctgatgatg
2101 aacacagcac atttgcatac agcgttttttgc gggagactc actgtttgtg cccgacacagac
2161 atggagagcg acgcaacagt aacggcacca ccactgaaac ggaagtcaga aagagaagg
2221 taagcttta ccagatttca atggagatgc tgaggattt ccctggagg caaagagccg
2281 tgagcatagc cagcattctg accaacacaa tgaagaact tgaagaatct agacagaaat
2341 gtccggccatg ctgttataga tttgccaatg tttcttgcat ctggactgc tgtgatgcat
2401 ggttaaaagt aaaacatctt gtatgttgc tccattttttt gatcttgcac
2461 tcactatttgc cattgtctta aataccctct ttatggccat ggagcactac cccatgactg
2521 agcaatttcag tagtgtgttgc actgttagaa acctggctt tactggatt ttccacagcag
2581 aaatggtttca agatcatttgc catggatc cttattacta tttccaagaa ggctggata
2641 tctttgttgc aattttgttgc agcctcagtt taatggactg tggctgtca aatgtggagg
2701 gattgtctgt actgcgtatca ttccagactgc tttagatttt caagttggca aaatcctggc
2761 ccacactaaa tatgttcaattt aagatcatttgc gcaattctgt gggggctcta gggaaacccca
2821 ctttgggtt ggcatttgc tttttttttt tttttttttt tttttttttt tttttttttt
2881 agagctacaa agaatgtgtc tgcaagatca atgatgactg tacgtccca cgggtggcaca
2941 tgaacgactt cttccactcc ttccctgttgc tttccggcgt gctgtgtgg aagttggatag
3001 agaccatgtg ggactgtatg gaggtcgctg gccaaaccat gtgcatttattt gttttcatgt
3061 tggtcatgtt cattggaaac ctttgggttgc tgaaccttgc tttttttttt tttttttttt
3121 catttagtgc agacaacctt gctgtacttgc atgatgacaa tggaaatgtt aatctgtcaga

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FIGURE 3 (continued)

3181 ttgcagtagg aagaatgaa aaggaaattt attatgtgaa aaataagatg cgggagtgtt
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 3301 acagctgcat gtccaataat actggaaattt aaataagcaa agagcttaat tatcttagag
 3361 atggaaatgg aaccaccagt ggtgttaggta ctggaaagcag tggtaaaaaa tacgtaatcg
 3421 atgaaaatga ttatatgtca ttccataaaca accccagcct caccgtcaca gtgccaattg
 3481 ctgttggaga gtctgacttt gaaaacttaa atactgaaga gttcagcagt gagtcagaac
 3541 tagaagaaaag caaagagaaa ttaaatgcaa ccagctcatc tgaaggaagc acagttgatg
 3601 ttgttctacc ccgagaaggt gaacaagctg aaactgaacc cgaagaagac cttaaacccgg
 3661 aagcttgttt tactgaagga tgtttaaaa agtttccatt ctgtcaagta agtacagaag
 3721 aaggcaaagg gaagatctgg tggaaatcttc gaaaaacccgt ctacagtatt gttgagcaca
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 3901 tcttaccta tatattcatc ctggaaatgc ttctcaaattt ggttgcattt ggatttcaaa
 3961 catatccac taatgcctgg tgctggcttag atttcttgcattt cgttgcattt tctttggta
 4021 gcctggtagc caatgctctt ggctactcag aactcggcgc catcaaattca ttacggacat
 4081 taagagcttt aagacctcta agagccttat cccggtttga aggcatgagg gtgggtgtga
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 4261 acatgacaac gggtaacatg tttgacatta gtgtatgttca caatttgagt gactgtcagg
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 4621 cagaggaaca gaaaaaaatatacataatgca tgaagaaaact tggatccaag aaacotcaga
 4681 aaccatacc tcgcccagca aacaattcc aaggaatgtt ctttgcattt gtaaccagac
 4741 aagtctttga tatacgtatc atgatctca tctgcctcaa catggtcacc atgatggtgg
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 5221 ttgtatgacat gttcaactttt gagacctttt gcaacagcat gatctgcttgc ttccaaattta
 5281 caacctctgc tggctggat ggattgttag cacctattttt taatagtgc ccacccgact
 5341 gtgaccctga cacaattcac cctggcagct cagttaaagg agactgtggg aaccatctg
 5401 ttgggatttt ctttttcgtc agttacatca tcatatcctt cctgggtgtg gtgaacatgt
 5461 acatcgccgt catcctggag aacttcagtg ttgctactga agaaaatgtca gagccctgt
 5521 gtgaggatga ctttgagat ttctatgagg ttggggaaaaa gtttgcattt gatgcgaccc
 5581 agtttataga ttgttgcattt ctctgttgcattt ttgcagctgc cctggatctt ctccttctca
 5641 tagcaaaacc caacaaagtc cagttattt ccatggatct gcccattggc agtggtgacc
 5701 ggatccactg tcttgatatt ttatttgctt ttacaaagcg tggtttgggt gagagtggag
 5761 agatggatgc ctttcgaaata cagatggaaag acaggtttgc ggcataaac ccctccaaag
 5821 tctcttatga gccttattaca accacttgc aacgtaaaca agaggaggtg tctggcctca
 5881 tcattcagcg taatttcaga tggtatctt taaagcaag gttaaaaat atatcaagta
 5941 actataacaa agaggcaattt aaaggagga ttgacttacc tataaaacaa gacatgatta
 6001 ttgacaaaact aaatggaaac tccactccat aaaaaacaga tggagttcc tctaccaccc
 6061 ctcctccttc ctatgtatgtt gtaacaaaac cagacaagga aaagtttgc gaaacaaac
 6121 cagaaaaaaa aagcaaaagga aaagaggcttca gagaatca aaagaaaaaa gaaacaaagaa
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 6241 ttcaagagga ggtccatgcc aaactgactg tttaacaaa tactcatatgt cagtcctat
 6301 acaagacagt gaagtgcact ctctgtcaact gcaactctgt gaagcagggt atcaacatttgc
 6361 acaagagggtt gctgttttta ttaccagctg acactgctga ggagaaaccc aatggctacc

FIGURE 3 (continued)

6421 tagactatacg ggatagttgt gcaaagtgaa cattgtaact acacccaaaca ccttttagtac
6481 agtccttgca tccattctat ttttaacttc catatctgcc atattttac aaaatttgtt
6541 ctagtgcatt tccatggc ccaattcata gtttattcat aatgctatgt cactattt

FIGURE 4: amino acid sequence of human SCN3A (SEQ ID NO: 4)

MAQALLVPPGPESFRLFTRESLAAIEKRAAEKKPKKEQDNDDENKPKNSDLEAGKNLPFI
YGDIPPEMVSEPLEDLDPPYYINKKTFIVMNKGKAIFRFSATSALYILTPLN PVRKIAIKILVHS
LFSMLIMCTILTNCVFMTLSNPPDWTKNVEYFTGIYTFESLIKILARGFCLEDFTFLRDPWNW
LDFSVIVMAYVTEFVSLGNVSALRTFVL RALKTISVI PGLKTIVGALIQSVKKLSDVMILTVF
CLSVFALIGLQLFMGNLRNKCLQWPPSDAFETNTTSYFNGTMDNSNGTFVNVTMSTFNWKDYIG
DDSHFYVLDGQKDPLLCGNGSDAGQCPEGYICVKAGRNP NYGYTSFDTFSWAFLSLFRLMTQDY
WENLYQLTLRAAGKTYMIFFVLVI FLGSFYL VNL LIAVVAMAYEEQNQATLEEAEQKEAEFQQM
LEQLKKQQEEAQAVAAASAASRDFSGIGGLGELLESSSEASKLSSKSAKEWRNRKKRRQREHL
EGNNKGERDSFPKSESED SVKRSSFLFSMDGNRLTSDKKFCSPHQ SLLSIRGSLFSPRRNSKTS
IFSFRGRAKDVGESENDFADDEHSTFEDSESRRDSL FVPHRGERRNSNGTTETEVKRLSSY
QISMEMLEDSSGRQRAVSIASILTNTMEELEESRQKCPCWYRFANVFLIWDCDAWLKVHLV
NLIVMDPFVDLAITCIVLNTLFMAMEHYPMTEQFSSVLTVGNLVFTGIFTAEMVLKIIAMD
YYFQEGWNIFDGIVVSLSLMELGLSNVEGLSVLRSFRLLRVFKLAKSWPTLNMLIKIIGN
SVGA LGNLTLVLAIIVFIFAVVGMQLFGKSYKECVCKINDDCTLPRWHMNDFFHSFLIVFRVL
GEWI ETMWDCMEVAGQTMC LIVFMLVMVIGNLVNLFLALLLSSFSSDNLAATDDNEMNNLQIAVG
RMQKGIDYVKNKMRECQKAFFRKPKVIEIHEGNKIDSCMSNNTGIEISKE
LNLYLRDGNGTTSG VGTGSSVEKYVIDENDYMSFINNPSLT
VPIAVGESDFENLNT
EEFSSESELEESKEKL
NATS SSEGSTVDVVL
PREGEQAETEPEE
DLKPEACFTEGC
IKKFPFCQVSTE
EGKGK
KIWWNLRKT
CYS IVEHNWFET
FIVFMILLSS
GALAFEDIYIE
QRKT
IKTMLEYAD
KVFTYI FILE
MLLK
WVAY
YGFQ TYFTNAWC
WLDFLIVD
VSLVSL
VANAL
GYSEL
GAI
KSL
RTL
RALR
PLR
ALS
RFE
GM
R
VV
NALV
GA
IPS
IM
NV
LL
V
CL
I
FW
L
I
F
S
IM
GV
NL
FAG
KFY
HC
VN
MT
TG
NM
FD
IS
DV
NN
L
SD
C
Q
AL
G
K
Q
AR
W
K
NV
K
VN
FD
NV
GAG
Y
L
L
Q
V
AT
FK
GW
MD
I
M
Y
A
V
D
S
R
D
V
K
L
Q
P
V
Y
E
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N
Y
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I
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FIGURE 5: cDNA of human sodium channel a-subunit variant by Jeong et al. (SEQ ID NO: 5)

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1 agcgaagccgg aggataaagc agagaggatt ctggaaaggc ctctttgtt tcttatccac
61 agagaaaagaa agaaaaaaaaa ttgttaactaa ttgttaaacc tctgtggca aaaaaaaaaa
121 aaaaaaaaaa gctgaacagc tgccagagga agacacgtt accctaacc atcttgatg
181 ctgggctttt ttatgtgtt attcataagg ctctgtttt tcagagatta tggagcaaga
241 aaactgaagc caagccacat caagggttga cagggatgag atacgttca aggattcata
301 gtagagtggc ttactggaa aggagcaaag aatcttttctt agggatattt taagaataaa
361 tgagataatt cacagaaggg acctggagct ttccggaaa aagggtgtt gactatctaa
421 ggttaatttgtt atgcaagaag ctacacgtt aaaaatgtgc aggtgaaaa gatggcacag
481 gcactgttgg tacccccagg acctgaaagc ttccgcctt ttactagaga atcttctgt
541 gctatcgaaa aacgtgttc agaagagaaa gccaagaagc cccaaaagga acaagataat
601 gatgatgaga acaaaccaaa gccaaatagt gacttggaa ctggaaagaa cttccattt
661 atttatggag acattctcc agagatggt tcaagagcccc tggaggacct ggatccctac
721 tatacaata agaaaaacttt tatagtatg aataaaggaa aggcaatttt ccgattcagt
781 gccacctctg cttgtatat tttaactcca ctaaacccctg ttaggaaaat tgctatcaag
841 attttggtag attctttatt cagcatgtt atcatgtgca ctatggac caactgtgtt
901 tttatgaccc ttggcaaccc tcctgactgg acaaagaatg tagagtacac attcaactgg
961 atctataacct ttggatcact tataaaaatc ttggcaagag ggttttgcctt agaagattt
1021 acgtttcttc gtgtatccatg gaactggctg gatttcagt tcaattgtat ggcataatgtg
1081 acagagttt tggacctggg caatgtctca gcgttggaaa cattcagagt tctccggagca
1141 ctgaaaacaa ttccatgtcat tccagggttta aagaccattt tggggggccct gatccagtcg
1201 gtaaaagaagc ttctgtatgt gatgtccctg actgtgttctt gtctgagcgt gtttgcctc
1261 attgggctgc agctgttcat gggcaatctg aggaataaat gtttgcagt gcccccaagc
1321 gattctgttt ttggaaaccaa caccactcc tactttatg gcacaatggg ttcaaattggg
1381 acatttgtt atgttacaat gggccatattt aactggaaagg attacattgg agatgacagt
1441 cactttatg tttggatgg gcaaaaagac ctttactct gtggaaatgg ctcagatgca
1501 ggccagtgtc cagaaggata catctgtgt aaggctggc gaaaccccaa ctatggctac
1561 acaagctttg acaccttttgc ctgggcttc ctgtctctat ttcgactcat gactcaagac
1621 tattggggaaa atctttacca gttgacatca cgtgtgttgg ggaaaacata catgatattt
1681 tttgtctgg tcattttctt gggctcat tatttggatg atttgtatctt ggctgtgtg
1741 gccatggcct atgaggagca gaatcaggcc accttggaa aagcagaaca aaaagagggc
1801 gaatttcagc agatgttgc acagctaaa aagcaacagg aagaagctca ggcagttgcg
1861 gcagcatcag ctgttcaag agatttcagt ggagtaggtt ggttaggaga gctgttgaa
1921 agttcttcag aagcatcaaa gttgagttcc aaagggtcta aagaatggag gaaccggagg
1981 aagaaaaagaa gacagagaga gcacccctgaa gaaacacaaca aaggagagag agacagctt
2041 cccaaatccg aatctgttgc acgttgcataa agaagcagct tcctttctc catggatgga
2101 aacagactga ccagtacaa aaaaattctgc tcccttcatac agtctctttt ggtatccgt
2161 ggctccctgt ttcccccaag acgcaatagc aaaacaagca ttttctttt cagaggtcg
2221 gcaaaggatg ttggatctga aatgtactt gctgtatgtt aacacagcac atttgaagac
2281 ggcgaaaagca ggagagactc actgtttgtt cccgcacagac atggagagcg acgcaacagt
2341 aacgttagtc agccagttt gtcattccagg atgggtggccag ggcttccagc aaatggggaa
2401 atgcacagca ctgtggattt caatgtgtt gtttccctgg tgggtggacc ttcatgtctt
2461 acgtcaccta ctggacaact tccccccagag ggcaccacca ctgaaacggg agtcagaaa
2521 agaagggtttaa gcttttacca gatttcaatg gagatgttgg aggattcctc tggaaaggcaa
2581 agagccgtga gcatagccag cattctgacc aacacaatgg aagaacttgc agaatctaga
2641 cagaaatgtc cggccatgtt gtatagattt gccaatgtgt tcttgcattt ggactgtgt
2701 gatgtatgtt taaaagttttt acatctgtt aatttatgtt ttatggatcc atttgttgc
2761 ctggccatca ctatgttcat tgcattttt acccttttgc tggccatgg gcaactacccc
2821 atgactgttgc aatttgcattt tgcatttttgc tggatggacc tggatggatcc tgggatttt
2881 acagcagaaaa tggatgttgc acatctgtt aatttatgtt ttatggatcc atttgttgc
2941 tggaaatatct ttgtatggat tattgttgc acgtttaa tggagcttgg tctgtcaaatt
3001 gtggaggat tgcattgttact ggcatttttttca agactgttgc gatgtttca gttggcaaaa
3061 tcctggccca cactaaatat gcttatttttgc atcattggca attctgtggg ggctcttagga
3121 aacccatccat tggatgttgc catcatgttcc ttcatttttgc tggatggatcc catgcagctc

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FIGURE 5 (continued)

3181 tttggtaaga gctacaaaga atgtgtctgc aagatcaatg atgactgtac gctcccacgg
 3241 tggcacatga acgacttctt ccactccttc ctgattgtgt tccgcgtgct gtgtggagag
 3301 tggatagaga ccatgtgggaa ctgtatggag gtcgcgtggcc aaaccatgtg ccttattgtt
 3361 ttcatgttgg tcatggtcat tggaaacctt gtggttctga acctcttctt ggccttatta
 3421 tttagttcat ttagctcaga caaccttgct getactgtatg atgacaatga aatgaataat
 3481 ctgcagattt cagtaggaag aatgcaaaag ggaattgatt atgtaaaaaa taagatgcgg
 3541 gagtgtttcc aaaaagcctt ttttagaaag ccaaaggta tagaaatcca tgaaggcaat
 3601 aagatagaca gctgcgtgtc caataatact ggaattgaaa taagcaaaga gcttaattat
 3661 ctttagatg ggaatggAAC caccagtgggt gttaggtactg gaagcgtgt tgaaaaatac
 3721 gtaatcgatg aaaatgatta tatgtcatttcc ataaacaacc ccagcctcac cgtcacagt
 3781 ccaattgtcg ttggagagtc tgactttgaa aacttaaata ctgaagaggta cagcagtgg
 3841 tcagaactag aagaaagcaa agagaaatta aatgcaacca gctcatctga aggaagcaca
 3901 gttgatgttgc ttctaccccg agaagggtgaa caagctgaaa ctgaacccga agaagactt
 3961 aaaccggaaat cttgttttac tgaagggtgt attaaaaagt ttccattctg tcaagtaagt
 4021 acagaagaag gcaaaggaaat gatctgggtt aatcttcgaa aaacctgtca cagtattgtt
 4081 gagcacaact gggtttagac tttcattgtg ttcatgtatcc ttctcagtag tggtgcattt
 4141 gcctttagaa atatatacat tgaacacgca aagactatca aaaccatgtc agaatatgtc
 4201 gacaaagtct ttacctataat attcattctg gaaatgttc tcaaatgggt tgcttatgg
 4261 tttcaaacat atttcaactaa tgcctgtgc tggcttagatt tcttgatcgt tgatgtttct
 4321 ttggtagcc tggtagccaa tgctcttgc tactcagaac tgggtgccat caaatcatta
 4381 cggacattaa gagctttaag acctctaaga gccttatccc gtttgaagg catgagggt
 4441 gttgtgaatg ctcttgggtt agcaattccc tctatcatga atgtgtgtt ggtctgttc
 4501 atcttctgg ttagtcttag catcatgggt gtgaattttt ttgcggcaaa gttctaccac
 4561 tggtagttaaca tgacaacggg taacatgttt gacatttagt atgtaacaa ttgagtgac
 4621 tgcagggttc ttggcaagca agctcgggtt aaaaacgtt aagtaaactt tgataatgtt
 4681 ggcgcgtggct atcttgcact gctcaagtg gccacattta aaggctggat ggatattatg
 4741 tatgcagctg ttgattcagc agatgtaaa cttcagcctg tataatgtt aatctgtac
 4801 atgtattttt actttgtcat ctttatcatc ttgggtcat tcttcactctt gatatctt
 4861 attgggttca tcatagataa cttcaaccag cagaaaaaaa agtttggagg tcaagacatc
 4921 tttatgacag agaaacagaa aaaatattac aatgcaatga agaaacttgg atccaagaaa
 4981 cctcagaaac ccataccctcg cccagcaaaac aaattccaaag gaatggtctt tgatttgt
 5041 accagacaag tctttgatcat cagcatcatg atcctcatct gcctcaacat ggtcaccat
 5101 atgggtgaaa cggatgacca gggcaaaatac atgaccctag ttgttcccg gatcaaccta
 5161 gtgttcattt ttcgttccac tggagaattt gtgctgaagc tcgtttccct cagacactac
 5221 tacttcaacta taggctggaa catctttgac ttgttgggtt tgattctctc cattgttagt
 5281 atgtttctgg ctgagatgtt agaaaagtat tctgtgtccc ctaccttggat ccgagtgtac
 5341 cgtcttgcctt ggattggccg aatcctacgt ctgatcaaag gagcaaaagg gatccgcac
 5401 ctgccttttgc ttgtatgtt gtccttcct gcgttgcattt acatggccct cctgcttcc
 5461 ctggtcatgt ttagtctatgc catctttggg atgtcaact ttgcctatgt taaaaaggaa
 5521 gctggaaattt atgacatgtt caactttgag acctttggca acagcatgt ctgcttgc
 5581 caaattacaa cttctgtgg ctggatgga ttgcttagcac ctattctta tagtgcacca
 5641 cccgactgtg accctgacac aattcaccct ggcagctcag ttaagggaga ccgtggggac
 5701 ccatctgttgg ggatttttttttttgcatttgcatt tacatcatca tattttccctt ggttgggt
 5761 aacatgtaca tcgcggcat cctggagaac ttcatgttttgcatttgcatt tacatcatca
 5821 cccctgagtg aggatgaccc ttcatgttttgcatttgcatt tacatcatca aatccatcc
 5881 ggcgcgtggctt attagatgtt ctctaaactc tctgttttgcatttgcatt tacatcatca
 5941 cttctcatag caaaacccaa caaagtccag ctattttgcatttgcatt tacatcatca
 6001 ggtgaccggaa tccactgtct tgatatttttgcatttgcatt tacatcatca aatccatcc
 6061 agtggagaga tggatgccc tgcataacatg atgaaagaca ggtttatggc atcaaacc
 6121 tccaaagtctt ttagtgcatttgcatttgcatttgcatttgcatttgcatttgcatttgcatt
 6181 ggcgcgtatca ttcatgttttgcatttgcatttgcatttgcatttgcatttgcatttgcatt
 6241 tcaagtaact ataacaaaga ggcaatttttttttttttttttttttttttttttttttttttt
 6301 atgattatttgcatttgcatttgcatttgcatttgcatttgcatttgcatttgcatttgcatt
 6361 accacccctc ctcccttcata tgatgttgcatttgcatttgcatttgcatttgcatttgcatt

FIGURE 5 (continued)

6421 gacaaaccag aaaaagaaaag caaaggaaaa gaggtcagag aaaatcaaaa gtaaaaagaa
 6481 acaaagaatt atctttgtga tcaattgttt acagcctatg aaggtaaagt atatgtgtca
 6541 actggacttc aagaggaggt ccatgc当地 ctgactgtt taacaaatac tcatagtcag
 6601 tgcctataca agacagtgaa gtgaccttc tgtcaactgca actctgtgaa gcagggtatc
 6661 aacgttgaca agaggttgtt gttttatta ccagctgaca ctgctgagga gaaacccaat
 6721 ggctacccatc actataggga tagttgtca aagtgaacat tgtaactaca ccaaacacct
 6781 tttagtacagt ccttgc当地 attcttattt taacttccat atctgccata tttttacaaa
 6841 attttgttca gtgcatttcc atggccccaa attcatagtt tattcataat gctatgtcac
 6901 tattttgtt aatggaggtt acgttgaaa aacagtatac aagaaccctg tctctcaat
 6961 gatcagacaa aggtgtttt ccagagagat aaaattttt ctcaaaacca gaaaaagaaat
 7021 tggtaatggct acagtttccat ttacttccat ttcttagatg gctttaattt tgaaagtatt
 7081 tttagtctgtt atgtttgtt ctatctgaac agttatgtgc ctgtaaagtc tcctctaata
 7141 tttaaaggat tattttatg caaagtattc tgttttagca agtgc当地 atttcttaag
 7201 tttcagagct ctatattttaa ttttagtcaaa atgotttccaa aaaagtaatc taataaatcc
 7261 attctagaaa aatatatcta aagtattgtt tttagaataatg tgttccactt tctgctgcag
 7321 tattgcttgc cc当地tctgt ctctc当地 agctgatagt ctatgtcaat taaataccct
 7381 atgttatgtt aatagtattt ttatcctgtt gtgc当地tggat gggccaaat atatatacgcc
 7441 tgataaaacaa ct当地tattaa atcaaataatg taccacagtg tatgtgtctt ttgcaagctt
 7501 ccaacaggaa tgtagtccgtt atcatttccat aaacatagtt taaaggctat cactaatgca
 7561 tgtaatattt gc当地tgc当地 ctctttaa ct当地atccat tcttc当地aaag tcttggttaa
 7621 agaatgtcac atattggta tagaatgaaat tcaacctgtt ctgccc当地 tgc当地agcag
 7681 aataatttga agctatttac aaacacccctt acttttgc当地 ttttattca acatgatgt
 7741 catatggat ctctctggat ttcaaggaaa cacactggat actgc当地tact gacaaaaccc
 7801 attcttc当地 tttgctaaa aatatgtcta aaacttggat ttatatttca aatgtaaaaaa
 7861 tataatcaac ttatattgtc agcatattgtt acataagaaa attatatttca ggttgc当地tac
 7921 atcacaattt attttactt atgctttgc ttttgattt taatcacaat tccaaaccc
 7981 tgaatccata agattttca atggataattt cc当地aaaataa aaagtttagat aatgggtttt
 8041 atggatttct ttgttataat atatttctt ccattccat aggagatata ttggtcaac
 8101 actccaaaccc agatcattt ctaccacta tgggtgc当地tcc aatataaccc ttatatttca
 8161 gatgtttttt ttatttcaac tttttagtta ttacgtatg cagactatg ttatatttcc
 8221 aattccctgct gcactaaagc tattacaat ataacatgaa ct当地tttgc当地tccatg
 8281 aacaaaagtgg caaagtgttca caatttccat acatgatataa atttttgc当地tccaa
 8341 accaaaagtt taatgttaat ttttttaca aaacttatttca ctgtagtgc ttgaagaact
 8401 gcatgc当地ggg aattgttattt gctaaaaaga atggtagt acgtc当地tatttgc当地tcc
 8461 gaataaaattt catttttattt tgc当地tccat ttatttggct ct当地gggtttt ttgttttgc当地tcc
 8521 tttttgttca tggc当地tccat aaatataat aatataaaa acctgtgc当地tcc gatctgacat
 8581 ttgtatatacat aaaagtttac atgaatttca caacaaaacta gtgc当地tccatgatt caccaccc
 8641 tactacagaa caaaggccaa tt当地aaagcag ct当地gtgaaat ttttattgtt gcaaggatc
 8701 aagttcacat gttccaaactt tc当地gttga taataatagt agtaaccacc tacaatagct
 8761 ttcaatttca attaactccc ttggctataa gcatctaaac tcatcttcc tcaatataat
 8821 tggatgtatc ttccatatttca ttgggtggctt ataaatgtt catttttgc当地tcc tacttaatg
 8881 cattatataa actccatgtt atacataagg tattaaatgtt atgttatttgc当地tcc agaatttata
 8941 ttaactttttt ttcaagaac ccttggattt atgtgaggtc aaaacccaaac tcttatttcc
 9001 agtggaaaac tccaggatgtt atgc当地tccat atttgc当地tcc atatgttatt
 9061 tcataatttca cccataatatttca attatataag gtggaaaaaaa aaaaaaaaaaaa aaaaaaaaaaaa
 9121 aaa

FIGURE 6: amino acid sequence of human sodium channel α -subunit variant by Jeong et al. (SEQ ID NO: 6)

MAQALLVPPGPESFRLFTRESLAAIEKRAAEKKPKKEQDNDDENKPKNPSDLEAGKNLPFI
YGDIPPEMVSEPLEDLDPYYINKKTFIVMNKGKAIFRFSATSALYILTPLNPKRKIAIKILVHS
LFSMLIMCTILTNCVFMTLSNPPDWTKNVEYTFTGIYTFESLIKILARGFCLEDFTFLRDPWNW
LDFSVIVMAYVTEFVDLGNVSALRTFRVLRALKTISVIPLGKTIVGALIQSVKKLSDVMILTVF
CLSVFALIGLQLFMGNLRNKCLQWPPSDSAFETNTTSYFNGTMDNSNGTFVNVTMSTFNWKDYIG
DDSHFYVLDGQKDPLLCGNGSDAGQCPEGYICVKAGRNPNGYTSFDTFSWAFLSLFRLMTQDY
WENLYQLTLRAAGKTYMIFFVLVIFLGSFYLVLNLILAVVAMAYEEQNQATLEEAEQKEAFQQM
LEQLKKQQEEAQAVAAAASAASRDFSGVGGLGELLESSSEASKLSSKGAKERNRKKRRQREHL
EGNNKGERDSFPKSESEDVKRSSFLFSMDGNRLTSDKKFCSPHQSSLISRGLFSPRRN SKTS
IFSFRGRAKDVGSENDFADDEHSTFEDGESRRDSLFPVPHRGERRNSNVSQASMS SRMVPGLPA
NGKMHSTVDCNGVVSLVGGPSALTSPGTQLPPEGTTETEVRKRLSSYQISMEMLEDSSGRQR
AVSIASILTNTMEELEESRQKCPWYRFANVFLIWDCCDAWLKVKHLVNLIVMDPFVDLAIITI
CIVLNTLFMAMEHYPMTEQFSSVLTGVNLVFTGIFTAEMVLKI IAMDPYYYFQEGWNIFDGIIV
SLSLMELGLSNVEGLSVLRSFRLLRVFKLAWSPTLNMLIKI IGNsvgALGNLTVLAIIVFIF
AVVGMQLFGKSYKECVCKINDDCTLPRWHMNDFFHSFLIVFRVLGEWIETMWDCMEVAGQTMC
LIVFMLVMVGNLVLNLFLALLSSFSSDNLAAATDDNEMNNLQIAVGRMQKGIDYVKNKRE
CFQKAFFRKPKVIEIHEGNKIDSCMSNNTGIEISKELNYLRDGNGTTSGVGTGSSVEKYVIDEN
DYMSFINNPSLTVTVPPIAVGESDFENLNTEEFSSSELEESKEKLNATSSSEGSTVDVVL PREG
EQAEATEPEEDFKPEACFTEGCCIKKFPFCQVSTEEGKGKIWWNLRKTCYSIVEHNWFETFIVFMI
LLSSGALAFEDIYIEQRKTIKTMLEYADKVFTYI FILEMLKWVAYGFQTYFTNAWCWLDFLIV
DVSLVSLVANALGYSELGAIKSLRTLRLRPLRALSRFEGMRVVNALVGAIPSIMNVLLVCLI
FWLIFSIMGVNL FAGKFYHCVNMTGKMFIDISDVNNLSDCQALGKQARWKNVKVNF DNVGAGYL
ALLQVATFKGWM DIMYAAVDSRDVKLQPVYEEENLYMYLYFVIFI IFGSFFT LNLFIGVIIDNFN
QQKKKFGGQDI FMTEEQKKYYNAMKKLGSKPKQKPI PRPANKFQGMVDFVTRQFDISIMILI
CLNMVTMMVETDDQGKYM TLVL SRINLV FIVLFTGEFVLKL VSLRHYYFTIGWNIFDFVVVILS
IVGMFLAEMIEKYSVSP TLFRVIRLARI GRILR LIKGAKGIRTLLF ALMMSLPALF NI GLLLFL
VMFIYAIFGMSNFAYVKKEAGI DDMFNFETFGNSM ICLF QITTSAGWDG LLA PI LNS APPDCDP
DTIHPGSSVKGD RGDP SVG IFFFVSYII ISFL VVVN MYIAVILE NFSVATE EAEPL SEDDFEM
FYEVWEKFD PDA TQFIEFSK LSDFAA ALD PPLI A KPN KVQ LIAM DLP MVSGD RI HCL DIL FAF
TKRVLCESGEM DALRI QM ED RFM ASN PSK VSYEP ITTL KR KQEEV SAAI I QRN FRC YLL QRL
KNI SS NYN KEAI KGRIDL PI KQDM I IDK LNG N STPEK TDG SSS T PPP SYD SVT KPD KEK FEKD
KPEKESKGKEVRENQK

						Section 1
	(1)	1	10	20	30	48
ClareAJ251507	(1)					
huNalII18 (AK)	(1)					
JeongAF225987	(1)					
Consensus	(1)					
						Section 2
	(49)	49	60	70	80	96
ClareAJ251507	(1)					
huNalII18 (AK)	(1)					
JeongAF225987	(49)	TTTCTTATCCACAGAGAAAGAAAAGAAAAAATTGTAACTAATTGTA				
Consensus	(49)					
						Section 3
	(97)	97	110	120	130	144
ClareAJ251507	(1)					
huNalII18 (AK)	(1)					
JeongAF225987	(97)	AACCTCTGTGGTCAAAAAAAAAAAAAAGCTAACAGCTGCC				
Consensus	(97)					
						Section 4
	(145)	145	150	160	170	192
ClareAJ251507	(1)					
huNalII18 (AK)	(1)					
JeongAF225987	(145)	AGAGGAAGACACGTTA				
Consensus	(145)	TACCCCTAACCATCTGGATGCTGGGCTTGTT				
						Section 5
	(193)	193	200	210	220	240
ClareAJ251507	(33)					
huNalII18 (AK)	(1)					
JeongAF225987	(193)	ATGCTGTAATTCTAGGCTCTGTTTATCAGAGATTATGGAGCAAGA				
Consensus	(193)					
						Section 6
	(241)	241	250	260	270	288
ClareAJ251507	(81)					
huNalII18 (AK)	(1)					
JeongAF225987	(241)					
Consensus	(241)	AAACTGAAGCCAAGCCACATCAAGGTTGACAGGGATGAGATAACCTGT				
						Section 7
	(289)	289	300	310	320	336
ClareAJ251507	(129)					
huNalII18 (AK)	(1)					
JeongAF225987	(289)					
Consensus	(289)	CAAGGATTCTAGTAGAGTGGTTACTGGGAAAGGAGCAAAGAATCTC				

						Section 8
	(337) 337		350	360	370	384
ClareAJ251507	(177)					
huNalll18 (AK)	(1)					
JeongAF225987	(337)					
Consensus	(337) TTCTAGGGATATTGTAAGAATAATGAGATAATTACAGAAGGGACCT					
						Section 9
	(385) 385	390	400	410	420	432
ClareAJ251507	(225)					
huNalll18 (AK)	(1)					
JeongAF225987	(385)					
Consensus	(385) GGAGCTTTCCGGAAAAGGTGCTGTGACTATCTAAGGTAAATCGTAT					
						Section 10
	(433) 433	440	450	460	470	480
ClareAJ251507	(273)					
huNalll18 (AK)	(1)					
JeongAF225987	(433)					
Consensus	(433) GCAAGAACGCTACACGTAATTAAATGTGCAGGGATGAAAAGATGGCACAG					
						Section 11
	(481) 481	490	500	510		528
ClareAJ251507	(321)					
huNalll18 (AK)	(17)					
JeongAF225987	(481)					
Consensus	(481) GCACTGTTGGTACCCCCAGGACCTGAAAGCTCCGCCTTTTACTAGA					
						Section 12
	(529) 529	540	550	560		576
ClareAJ251507	(369)					
huNalll18 (AK)	(65)					
JeongAF225987	(529)					
Consensus	(529) GAATCTCTTGCTGCTATCGAAAAAACGTGCTGCAGAACAGAAAGCCAAG					
						Section 13
	(577) 577		590	600	610	624
ClareAJ251507	(417)					
huNalll18 (AK)	(113)					
JeongAF225987	(577)					
Consensus	(577) AAGCCCCAAAAGGAACAAGATAATGATGATGAGAACAAACCAAAGCCA					
						Section 14
	(625) 625	630	640	650	660	672
ClareAJ251507	(465)					
huNalll18 (AK)	(161)					
JeongAF225987	(625)					
Consensus	(625) AATAGTGACTTGGAAAGCTGGAAAGAACCTTCCATTATTTATGGAGAC					

Section 15						
ClareAJ251507	(673) 673	680	690	700	710	720
huNalII18 (AK)	(513) ATTCCTCCAGAGATGGTGTCAAGAGCCCCCTGGAGGACCTGGATCCCTAC					
JeongAF225987	(209) ATTCCTCCAGAGATGGTGTCAAGAGCCCCCTGGAGGACCTGGATCCCTAC					
Consensus	(673) ATTCCTCCAGAGATGGTGTCAAGAGCCCCCTGGAGGACCTGGATCCCTAC					
Section 16						
	(721) 721	730	740	750		768
ClareAJ251507	(561) TATATCAATAAGAAAACTTTATAGTAATGAATAAAGGAAAGGCAATT					
huNalII18 (AK)	(257) TATATCAATAAGAAAACTTTATAGTAATGAATAAAGGAAAGGCAATT					
JeongAF225987	(721) TATATCAATAAGAAAACTTTATAGTAATGAATAAAGGAAAGGCAATT					
Consensus	(721) TATATCAATAAGAAAACTTTATAGTAATGAATAAAGGAAAGGCAATT					
Section 17						
	(769) 769	780	790	800		816
ClareAJ251507	(609) TTCCGATTCAAGTGCCACCTCTGCCTTGTATATTTAATCCTAAAC					
huNalII18 (AK)	(305) TTCCGATTCAAGTGCCACCTCTGCCTTGTATATTTAATCCTAAAC					
JeongAF225987	(769) TTCCGATTCAAGTGCCACCTCTGCCTTGTATATTTAATCCTAAAC					
Consensus	(769) TTCCGATTCAAGTGCCACCTCTGCCTTGTATATTTAATCCTAAAC					
Section 18						
	(817) 817	830	840	850		864
ClareAJ251507	(657) CCTGTTAGGAAAATTGCTATCAAGATTTGGTACATTCTTATTCA					
huNalII18 (AK)	(353) CCTGTTAGGAAAATTGCTATCAAGATTTGGTACATTCTTATTCA					
JeongAF225987	(817) CCTGTTAGGAAAATTGCTATCAAGATTTGGTACATTCTTATTCA					
Consensus	(817) CCTGTTAGGAAAATTGCTATCAAGATTTGGTACATTCTTATTCA					
Section 19						
	(865) 865	870	880	890	900	912
ClareAJ251507	(705) ATGCTTATCATGTGCACTATTTGACCAACTGTGTATTTATGACCTTG					
huNalII18 (AK)	(401) ATGCTTATCATGTGCACTATTTGACCAACTGTGTATTTATGACCTTG					
JeongAF225987	(865) ATGCTTATCATGTGCACTATTTGACCAACTGTGTATTTATGACCTTG					
Consensus	(865) ATGCTTATCATGTGCACTATTTGACCAACTGTGTATTTATGACCTTG					
Section 20						
	(913) 913	920	930	940	950	960
ClareAJ251507	(753) AGCAACCCTCCTGACTGGACAAAGAACATGTAGAGTACACATTCACTGG					
huNalII18 (AK)	(449) AGCAACCCTCCTGACTGGACAAAGAACATGTAGAGTACACATTCACTGG					
JeongAF225987	(913) AGCAACCCTCCTGACTGGACAAAGAACATGTAGAGTACACATTCACTGG					
Consensus	(913) AGCAACCCTCCTGACTGGACAAAGAACATGTAGAGTACACATTCACTGG					
Section 21						
	(961) 961	970	980	990		1008
ClareAJ251507	(801) ATCTATACCTTGAGTCACTTATAAAAATCTTGGCAAGAGGGTTTG					
huNalII18 (AK)	(497) ATCTATACCTTGAGTCACTTATAAAAATCTTGGCAAGAGGGTTTG					
JeongAF225987	(961) ATCTATACCTTGAGTCACTTATAAAAATCTTGGCAAGAGGGTTTG					
Consensus	(961) ATCTATACCTTGAGTCACTTATAAAAATCTTGGCAAGAGGGTTTG					

Section 22						
	(1009) 1009	1020	1030	1040	1056	
ClareAJ251507	(849) TTAGAAGATTTACGTTCTCGT GATCCATGGA ACTGGCTGGATTTC					
huNallI18 (AK)	(545) TTAGAAGATTTACGTTCTCGT GATCCATGGA ACTGGCTGGATTTC					
JeongAF225987	(1009) TTAGAAGATTTACGTTCTCGT GATCCATGGA ACTGGCTGGATTTC					
Consensus	(1009) TTAGAAGATTTACGTTCTCGT GATCCATGGA ACTGGCTGGATTTC					
Section 23						
	(1057) 1057	1070	1080	1090	1104	
ClareAJ251507	(897) AGTGT CATTGT GATGGC ATATGT AACAGA ATTGT AAC CCT AGG CAAT					
huNallI18 (AK)	(593) AGTGT CATTGT GATGGC ATATGT AACAGA ATTGT AAC CCT AGG CAAT					
JeongAF225987	(1057) AGTGT CATTGT GATGGC ATATGT GACAGAGTTGT GGACCTGGCAAT					
Consensus	(1057) AGTGT CATTGT GATGGC GTATGT AACAGA ATTGT AACG CCTAGGCAAT					
Section 24						
	(1105) 1105	1110	1120	1130	1140	1152
ClareAJ251507	(945) GTCTCAGCGTTGAGAACATTCAGAGTTCTCCGAGCACTGAAAACATT					
huNallI18 (AK)	(641) GTCTCAGCGTTGAGAACATTCAGAGTTCTGGAGCCTGAAAACATT					
JeongAF225987	(1105) GTCTCAGCGTTGAGAACATTCAGAGTTCTCCGAGCACTGAAAACAATT					
Consensus	(1105) GTTCAGCCCCCTCGAACCTTCAGAGTCTTGAGAGCTCTGAAAACATT					
Section 25						
	(1153) 1153	1160	1170	1180	1190	1200
ClareAJ251507	(993) TCTGT ATTCCAGGTTAAAGACCATTGTGGGGCCCTGATCCAGTCG					
huNallI18 (AK)	(689) TCTGT ATTCCAGGTTAAAGACCATTGTGGGGCCCTGATCCAGTCG					
JeongAF225987	(1153) TCAGTCATTCCAGGTTAAAGACCATTGTGGGGCCCTGATCCAGTCG					
Consensus	(1153) TCTGT ATTCCAGGTTAAAGACCATTGTGGGGCCCTGATCCAGTCG					
Section 26						
	(1201) 1201	1210	1220	1230	1248	
ClareAJ251507	(1041) GTAAAGAAGCTTCTGATGT GATGATCCTGACTGTGTTCTGTCTGAGC					
huNallI18 (AK)	(737) GTAAAGAAGCTTCTGATGT GATGATCCTGACTGTGTTCTGTCTGAGC					
JeongAF225987	(1201) GTAAAGAAGCTTCTGATGT GATGATCCTGACTGTGTTCTGTCTGAGC					
Consensus	(1201) GTAAAGAAGCTTCTGATGT GATGATCCTGACTGTGTTCTGTCTGAGC					
Section 27						
	(1249) 1249	1260	1270	1280	1296	
ClareAJ251507	(1089) GTGTTGCTCTCATTGGGCTGCAGCTGTTCATGGCAATCTGAGGAAT					
huNallI18 (AK)	(785) GTGTTGCTCTCATTGGGCTGCAGCTGTTCATGGCAATCTGAGGAAT					
JeongAF225987	(1249) GTGTTGCTCTCATTGGGCTGCAGCTGTTCATGGCAATCTGAGGAAT					
Consensus	(1249) GTGTTGCTCTCATTGGGCTGCAGCTGTTCATGGCAATCTGAGGAAT					
Section 28						
	(1297) 1297	1310	1320	1330	1344	
ClareAJ251507	(1137) AAATGTTGCAGTGGCCCCCAAGCGATTCTGCTTTGAAACCAACACC					
huNallI18 (AK)	(833) AAATGTTGCAGTGGCCCCCAAGCGATTCTGCTTTGAAACCAACACC					
JeongAF225987	(1297) AAATGTTGCAGTGGCCCCCAAGCGATTCTGCTTTGAAACCAACACC					
Consensus	(1297) AAATGTTGCAGTGGCCCCCAAGCGATTCTGCTTTGAAACCAACACC					

Section 29							
	(1345)	1345	1350	1360	1370	1380	1392
ClareAJ251507	(1185)	ACTTCCTACTTTAATGGCACAATGGATTCAAATGGGACATTTGTTAAT					
huNallI18 (AK)	(881)	ACTTCCTACTTTAATGGCACAATGGATTCAAATGGGACATTTGTTAAT					
JeongAF225987	(1345)	ACTTCCTACTTTAATGGCACAATGGATTCAAATGGGACATTTGTTAAT					
Consensus	(1345)	ACTTCCTACTTTAATGGCACAATGGATTCAAATGGGACATTTGTTAAT					
Section 30							
	(1393)	1393	1400	1410	1420	1430	1440
ClareAJ251507	(1233)	GTAACAAATGAGCACATTAACTGGAAGGATTACATTGGAGATGACAGT					
huNallI18 (AK)	(929)	GTAACAAATGAGCACATTAACTGGAAGGATTACATTGGAGATGACAGT					
JeongAF225987	(1393)	GTAACAAATGAGCACATTAACTGGAAGGATTACATTGGAGATGACAGT					
Consensus	(1393)	GTAACAAATGAGCACATTAACTGGAAGGATTACATTGGAGATGACAGT					
Section 31							
	(1441)	1441	1450	1460	1470		1488
ClareAJ251507	(1281)	CACTTTATGTTGGATGGCAAAAAGACCCCTTACTCTGTGAAAT					
huNallI18 (AK)	(977)	CACTTTATGTTGGATGGCAAAAAGACCCCTTACTCTGTGAAAT					
JeongAF225987	(1441)	CACTTTATGTTGGATGGCAAAAAGACCCCTTACTCTGTGAAAT					
Consensus	(1441)	CACTTTATGTTGGATGGCAAAAAGACCCCTTACTCTGTGAAAT					
Section 32							
	(1489)	1489	1500	1510	1520		1536
ClareAJ251507	(1329)	GGCTCAGATGCAGGCCAGTGTCCAGAAGGATAACATCTGTGAAAGGCT					
huNallI18 (AK)	(1025)	GGCTCAGATGCAGGCCAGTGTCCAGAAGGATAACATCTGTGAAAGGCT					
JeongAF225987	(1489)	GGCTCAGATGCAGGCCAGTGTCCAGAAGGATAACATCTGTGAAAGGCT					
Consensus	(1489)	GGCTCAGATGCAGGCCAGTGTCCAGAAGGATAACATCTGTGAAAGGCT					
Section 33							
	(1537)	1537	1550	1560	1570		1584
ClareAJ251507	(1377)	GGTCGAAACCCC ACTATGGCTACACAAGCTTGACACCTTAGCTGG					
huNallI18 (AK)	(1073)	GGTCGAAACCCC ACTATGGCTACACAAGCTTGACACCTTAGCTGG					
JeongAF225987	(1537)	GGTCGAAACCCC ACTATGGCTACACAAGCTTGACACCTTAGCTGG					
Consensus	(1537)	GGTCGAAACCCC ACTATGGCTACACAAGCTTGACACCTTAGCTGG					
Section 34							
	(1585)	1585	1590	1600	1610	1620	1632
ClareAJ251507	(1425)	GCTTCCCTGTCTCATTTGACTCATGACTCAAGA					
huNallI18 (AK)	(1121)	GCTTCCCTGTCTCATTTGACTCATGACTCAAGATT					
JeongAF225987	(1585)	GCTTCCCTGTCTCATTTGACTCATGACTCAAGA					
Consensus	(1585)	GCTTCCCTGTCTCATTTGACTCATGACTCAAGACTACTGGGAAAAT					
Section 35							
	(1633)	1633	1640	1650	1660	1670	1680
ClareAJ251507	(1473)	CTTTACCAGTTGACATTACGTGCTGCTGGGAAAACATACATGATATT					
huNallI18 (AK)	(1169)	CTTTACCAGTTGACATTACGTGCTGCTGGGAAAACATACATGATATT					
JeongAF225987	(1633)	CTTTACCAGTTGACATTACGTGCTGCTGGGAAAACATACATGATATT					
Consensus	(1633)	CTTTACCAGTTGACATTACGTGCTGCTGGGAAAACATACATGATATT					

						Section 36
	(1681)	1681	1690	1700	1710	1728
ClareAJ251507	(1521)	TTTGTCTGGTCATTTCTGGGCTCATTATTTGGTGAATTGATC				
huNallI18 (AK)	(1217)	TTTGTCTGGTCATTTCTGGGCTCATTATTTGGTGAATTGATC				
JeongAF225987	(1681)	TTTGTCTGGTCATTTCTGGGCTCATTATTTGGTGAATTGATC				
Consensus	(1681)	TTTGTCTGGTCATTTCTGGGCTCATTATTTGGTGAATTGATC				
						Section 37
	(1729)	1729	1740	1750	1760	1776
ClareAJ251507	(1569)	CTGGCTGTGGTGGCCATGGCCTATGAGGAGCAGAACATCAGGCCACCTTG				
huNallI18 (AK)	(1265)	CTGGCTGTGGTGGCCATGGCCTATGAGGAGCAGAACATCAGGCCACCTTG				
JeongAF225987	(1729)	CTGGCTGTGGTGGCCATGGCCTATGAGGAGCAGAACATCAGGCCACCTTG				
Consensus	(1729)	CTGGCTGTGGTGGCCATGGCCTATGAGGAGCAGAACATCAGGCCACCTTG				
						Section 38
	(1777)	1777	1790	1800	1810	1824
ClareAJ251507	(1617)	GAAGAACGAGAACAAAAAGAGGCCGAATTTCAGCAGATGCTCGAACAG				
huNallI18 (AK)	(1313)	GAAGAACGAGAACAAAAAGAGGCCGAATTTCAGCAGATGCTCGAACAG				
JeongAF225987	(1777)	GAAGAACGAGAACAAAAAGAGGCCGAATTTCAGCAGATGCTCGAACAG				
Consensus	(1777)	GAAGAACGAGAACAAAAAGAGGCCGAATTTCAGCAGATGCTCGAACAG				
						Section 39
	(1825)	1825	1830	1840	1850	1872
ClareAJ251507	(1665)	CTAAAAAGCAACAGGAAGAAGCTCAGGCAGTTGCAGGCAGCATCAGCT				
huNallI18 (AK)	(1361)	CTAAAAAGCAACAGGAAGAAGCTCAGGCAGTTGCAGGCAGCATCAGCT				
JeongAF225987	(1825)	CTAAAAAGCAACAGGAAGAAGCTCAGGCAGTTGCAGGCAGCATCAGCT				
Consensus	(1825)	CTAAAAAGCAACAGGAAGAAGCTCAGGCAGTTGCAGGCAGCATCAGCT				
						Section 40
	(1873)	1873	1880	1890	1900	1920
ClareAJ251507	(1713)	GCTTCAAGAGATTCAGTGGATAGGTGGGTTAGGAGAGCTGTTGGAA				
huNallI18 (AK)	(1409)	GCTTCAAGAGATTCAGTGGATAGGTGGGTTAGGAGAGCTGTTGGAA				
JeongAF225987	(1873)	GCTTCAAGAGATTCAGTGGAGTAGGTGGGTTAGGAGAGCTGTTGGAA				
Consensus	(1873)	GCTTCAAGAGATTCAGTGGAAATAGGTGGGTTAGGAGAGCTGTTGGAA				
						Section 41
	(1921)	1921	1930	1940	1950	1968
ClareAJ251507	(1761)	AGTTCTCAGAACATCAAAGTTGAGTTCCAAAAGTGCTAAAGAACATGG				
huNallI18 (AK)	(1457)	AGTTCTCAGAACATCAAAGTTGAGTTCCAAAAGTGCTAAAGAACATGG				
JeongAF225987	(1921)	AGTTCTCAGAACATCAAAGTTGAGTTCCAAAAGGTGCTAAAGAACATGG				
Consensus	(1921)	AGTTCTCAGAACATCAAAGTTGAGTTCCAAAAGTGCTAAAGAACATGG				
						Section 42
	(1969)	1969	1980	1990	2000	2016
ClareAJ251507	(1809)	AGGAACCGAGGAAGAAAAAGAACAGAGAGAGCACCTTGAGGAAAC				
huNallI18 (AK)	(1505)	AGGAACCGAGGAAGAAAAAGAACAGAGAGAGCACCTTGAGGAAAC				
JeongAF225987	(1969)	AGGAACCGGAGGAAGAAAAAGAACAGAGAGAGCACCTTGAGGAAAC				
Consensus	(1969)	AGGAACCGAAGGAAGAAAAAGAACAGAGAGAGCACCTTGAGGAAAC				

Section 43

(2017) 2017

2030

2040

2050

2064

ClareAJ251507 (1857) AACAAAGGAGAGAGAGACAGCTTCCAAATCGAATCTGAAGACAGC
 huNalII18 (AK) (1553) AACAAAGGAGAGAGAGACAGCTTCCAAATCGAATCTGAAGACAGC
 JeongAF225987 (2017) AACAAAGGAGAGAGAGACAGCTTCCAAATCGAATCTGAAGACAGC
 Consensus (2017) AACAAAGGAGAGAGAGACAGCTTCCAAATCGAATCTGAAGACAGC

Section 44

(2065) 2065 2070

2080

2090

2100

2112

ClareAJ251507 (1905) GTCAAAAGAACAGCAGCTCCTTTCTCCATGGATGGAAACAGACTGACC
 huNalII18 (AK) (1601) GTCAAAAGAACAGCAGCTCCTTTCTCCATGGATGGAAACAGACTGACC
 JeongAF225987 (2065) GTCAAAAGAACAGCAGCTCCTTTCTCCATGGATGGAAACAGACTGACC
 Consensus (2065) GTCAAAAGAACAGCAGCTCCTTTCTCCATGGATGGAAACAGACTGACC

Section 45

(2113) 2113 2120

2130

2140

2150

2160

ClareAJ251507 (1953) AGTGACAAAAAAATTCTGCTCCCCTCATCAGTCTCTCTGAGTATCCGT
 huNalII18 (AK) (1649) AGTGACAAAAAAATTCTGCTCCCCTCATCAGTCTCTCTGAGTATCCGT
 JeongAF225987 (2113) AGTGACAAAAAAATTCTGCTCCCCTCATCAGTCTCTCTGAGTATCCGT
 Consensus (2113) AGTGACAAAAAAATTCTGCTCCCCTCATCAGTCTCTCTGAGTATCCGT

Section 46

(2161) 2161

2170

2180

2190

2208

ClareAJ251507 (2001) GGCTCCCTGTTTCCCCAAGACGCAATAGCAAAACAAGCATTTTAGT
 huNalII18 (AK) (1697) GGCTCCCTGTTTCCCCAAGACGCAATAGCAAAACAAGCATTTTAGT
 JeongAF225987 (2161) GGCTCCCTGTTTCCCCAAGACGCAATAGCAAAACAAGCATTTTAGT
 Consensus (2161) GGCTCCCTGTTTCCCCAAGACGCAATAGCAAAACAAGCATTTTAGT

Section 47

(2209) 2209

2220

2230

2240

2256

ClareAJ251507 (2049) TTCAGAGGTGGGCAAAGGATGTTGGATCTGAAAATGACTTTGCTGAT
 huNalII18 (AK) (1745) TTCAGAGGTGGGCAAAGGATGTTGGATCTGAAAATGACTTTGCTGAT
 JeongAF225987 (2209) TTCAGAGGTGGGCAAAGGATGTTGGATCTGAAAATGACTTTGCTGAT
 Consensus (2209) TTCAGAGGTGGGCAAAGGATGTTGGATCTGAAAATGACTTTGCTGAT

Section 48

(2257) 2257

2270

2280

2290

2304

ClareAJ251507 (2097) GATGAACACAGCACATTGAAAGACAGCGAAAGCAGGAGAGACTCACTG
 huNalII18 (AK) (1793) GATGAACACAGCACATTGAAAGACAGCGAAAGCAGGAGAGACTCACTG
 JeongAF225987 (2257) GATGAACACAGCACATTGAAAGACGGCGAAAGCAGGAGAGACTCACTG
 Consensus (2257) GATGAACACAGCACATTGAAAGACAGCGAAAGCAGGAGAGACTCACTG

Section 49

(2305) 2305 2310

2320

2330

2340

2352

ClareAJ251507 (2145) TTTGTGCCGCACAGACATGGAGAGCGACGCAACAGTAACG-----
 huNalII18 (AK) (1841) TTTGTGCCGCACAGACATGGAGAGCGACGCAACAGTAACG-----
 JeongAF225987 (2305) TTTGTGCCGCACAGACATGGAGAGCGACGCAACAGTAACG-----
 Consensus (2305) TTTGTGCCGCACAGACATGGAGAGCGACGCAACAGTAACGTTAGTCAG

Section 50						
	(2353)	2353	2360	2370	2380	2390
ClareAJ251507 (2185)						2400
huNalII18 (AK) (1889)	GCCAGTATGTCATCCAGGATGGTGCCAGGGTTCCAGCAAATGGGAAG					
JeongAF225987 (2353)	GCCAGTATGTCATCCAGGATGGTGCCAGGGTTCCAGCAAATGGGAAG					
Consensus (2353)	GCCAGTATGTCATCCAGGATGGTGCCAGGGTTCCAGCAAATGGGAAG					
Section 51						
	(2401)	2401	2410	2420	2430	2448
ClareAJ251507 (2185)						
huNalII18 (AK) (1937)	ATGCACAGCACTGTGGATTGCAATGGTGTGGTTCCGTGGTGCGGGAA					
JeongAF225987 (2401)	ATGCACAGCACTGTGGATTGCAATGGTGTGGTTCCGTGGTGCGGGAA					
Consensus (2401)	ATGCACAGCACTGTGGATTGCAATGGTGTGGTTCCGTGGTGCGGGAA					
Section 52						
	(2449)	2449	2460	2470	2480	2496
ClareAJ251507 (2185)						-GCACC
huNalII18 (AK) (1985)	GTTCAGCTCTGGTCAAGGATGGTACAGAATGTCACGACAGCAGCAGC					-GCACC
JeongAF225987 (2449)	GTTCAGCTCTGGTCAAGGATGGTACAGAATGTCACGACAGCAGCAGC					-GCACC
Consensus (2449)	CCTTCAGCTAACGTCACCTACTGGACAACTTCCCCAGAGGGCACC					
Section 53						
	(2497)	2497	2510	2520	2530	2544
ClareAJ251507 (2190)	ACCACTGAAACGGAAGTCAGAAAGAGAAGGTTAAGCTCTTACCAAGATT					
huNalII18 (AK) (2033)	ACCACTGAAACGGAAGTCAGAAAGAGAAGGTTAAGCTCTTACCAAGATT					
JeongAF225987 (2497)	ACCACTGAAACGGAAGTCAGAAAGAGAAGGTTAAGCTCTTACCAAGATT					
Consensus (2497)	ACCACTGAAACGGAAGTCAGAAAGAGAAGGTTAAGCTCTTACCAAGATT					
Section 54						
	(2545)	2545	2550	2560	2570	2580
ClareAJ251507 (2238)	TCAATGGAGATGCTGGAGGATTCTCTGGAAAGGCAAAGAGCCGTGAGC					
huNalII18 (AK) (2081)	TCAATGGAGATGCTGGAGGATTCTCTGGAAAGGCAAAGAGCCGTGAGC					
JeongAF225987 (2545)	TCAATGGAGATGCTGGAGGATTCTCTGGAAAGGCAAAGAGCCGTGAGC					
Consensus (2545)	TCAATGGAGATGCTGGAGGATTCTCTGGAAAGGCAAAGAGCCGTGAGC					
Section 55						
	(2593)	2593	2600	2610	2620	2630
ClareAJ251507 (2286)	ATAGCCAGCATCTGACCAACACAATGGAAGAACTTGAAGAATCTAGA					
huNalII18 (AK) (2129)	ATAGCCAGCATCTGACCAACACAATGGAAGAACTTGAAGAATCTAGA					
JeongAF225987 (2593)	ATAGCCAGCATCTGACCAACACAATGGAAGAACTTGAAGAATCTAGA					
Consensus (2593)	ATAGCCAGCATCTGACCAACACAATGGAAGAACTTGAAGAATCTAGA					
Section 56						
	(2641)	2641	2650	2660	2670	2688
ClareAJ251507 (2334)	CAGAAATGTCCGCCATGCTGGTATAGATTTGCCAATGTGTTCTTGATC					
huNalII18 (AK) (2177)	CAGAAATGTCCGCCATGCTGGTATAGATTTGCCAATGTGTTCTTGATC					
JeongAF225987 (2641)	CAGAAATGTCCGCCATGCTGGTATAGATTTGCCAATGTGTTCTTGATC					
Consensus (2641)	CAGAAATGTCCGCCATGCTGGTATAGATTTGCCAATGTGTTCTTGATC					

Section 57					
(2689)	2689	2700	2710	2720	2736
ClareAJ251507	(2382)	TGGGACTGCTGTGATGCATGGTAAAAGTAAACATCTTGTGAATT	TA		
huNalII18 (AK)	(2225)	TGGGACTGCTGTGATGCATGGTAAAAGTAAACATCTTGTGAATT	TA		
JeongAF225987	(2689)	TGGGACTGCTGTGATGCATGGTAAAAGTAAACATCTTGTGAATT	TA		
Consensus	(2689)	TGGGACTGCTGTGATGCATGGTAAAAGTAAACATCTTGTGAATT	TA		
Section 58					
(2737)	2737	2750	2760	2770	2784
ClareAJ251507	(2430)	ATTGTTATGGATCCATTGTTGATCTGCCATCACTATTCGATTGTC			
huNalII18 (AK)	(2273)	ATTGTTATGGATCCATTGTTGATCTGCCATCACTATTCGATTGTC			
JeongAF225987	(2737)	ATTGTTATGGATCCATTGTTGATCTGCCATCACTATTCGATTGTC			
Consensus	(2737)	ATTGTTATGGATCCATTGTTGATCTGCCATCACTATTCGATTGTC			
Section 59					
(2785)	2785	2790	2800	2810	2820
ClareAJ251507	(2478)	TTAAATACCCCTTTATGGCATGGAGCACTACCCATGACTGAGCAA			
huNalII18 (AK)	(2321)	TTAAATACCCCTTTATGGCATGGAGCACTACCCATGACTGAGCAA			
JeongAF225987	(2785)	TTAAATACCCCTTTATGGCATGGAGCACTACCCATGACTGAGCAA			
Consensus	(2785)	TTAAATACCCCTTTATGGCATGGAGCACTACCCATGACTGAGCAA			
Section 60					
(2833)	2833	2840	2850	2860	2880
ClareAJ251507	(2526)	TTCAGTAGTGTGTTGACTGTAGGAAACCTGGCTTTACTGGGATTTC			
huNalII18 (AK)	(2369)	TTCAGTAGTGTGTTGACTGTAGGAAACCTGGCTTTACTGGGATTTC			
JeongAF225987	(2833)	TTCAGTAGTGTGTTGACTGTAGGAAACCTGGCTTTACTGGGATTTC			
Consensus	(2833)	TTCAGTAGTGTGTTGACTGTAGGAAACCTGGCTTTACTGGGATTTC			
Section 61					
(2881)	2881	2890	2900	2910	2928
ClareAJ251507	(2574)	ACAGCAGAAATGGTCTCAAGATCATTGCCATGGATCCTTATTACTAT			
huNalII18 (AK)	(2417)	ACAGCAGAAATGGTCTCAAGATCATTGCCATGGATCCTTATTACTAT			
JeongAF225987	(2881)	ACAGCAGAAATGGTCTCAAGATCATTGCCATGGATCCTTATTACTAT			
Consensus	(2881)	ACAGCAGAAATGGTCTCAAGATCATTGCCATGGATCCTTATTACTAT			
Section 62					
(2929)	2929	2940	2950	2960	2976
ClareAJ251507	(2622)	TTCCAAGAAGGCTGGAATATCTTGTGATGGAATTATTGTCAGCCTCAGT			
huNalII18 (AK)	(2465)	TTCCAAGAAGGCTGGAATATCTTGTGATGGAATTATTGTCAGCCTCAGT			
JeongAF225987	(2929)	TTCCAAGAAGGCTGGAATATCTTGTGATGGAATTATTGTCAGCCTCAGT			
Consensus	(2929)	TTCCAAGAAGGCTGGAATATCTTGTGATGGAATTATTGTCAGCCTCAGT			
Section 63					
(2977)	2977	2990	3000	3010	3024
ClareAJ251507	(2670)	TTAATGGAGCTTGGTCTGTCAAATGTGGAGGGATTGTCTGTACTGCGA			
huNalII18 (AK)	(2513)	TTAATGGAGCTTGGTCTGTCAAATGTGGAGGGATTGTCTGTACTGCGA			
JeongAF225987	(2977)	TTAATGGAGCTTGGTCTGTCAAATGTGGAGGGATTGTCTGTACTGCGA			
Consensus	(2977)	TTAATGGAGCTTGGTCTGTCAAATGTGGAGGGATTGTCTGTACTGCGA			

						Section 64
(3025)	3025	3030	3040	3050	3060	3072
ClareAJ251507 (2718)	TCATTCAAGACTGCTAGAGTTTCAAGTTGGCAAAATCCTGGCCCACA					
huNallI18 (AK) (2561)	TCATTCAAGACTGCTAGAGTTTCAAGTTGGCAAAATCCTGGCCCACA					
JeongAF225987 (3025)	TCATTCAAGACTGCTAGAGTTTCAAGTTGGCAAAATCCTGGCCCACA					
Consensus (3025)	TCATTCAAGACTGCTAGAGTTTCAAGTTGGCAAAATCCTGGCCCACA					
						Section 65
(3073)	3073	3080	3090	3100	3110	3120
ClareAJ251507 (2766)	CTAAATATGCTAATTAAGATCATTGGCAATTCTGTGGGGCTCTAGGA					
huNallI18 (AK) (2609)	CTAAATATGCTAATTAAGATCATTGGCAATTCTGTGGGGCTCTAGGA					
JeongAF225987 (3073)	CTAAATATGCTAATTAAGATCATTGGCAATTCTGTGGGGCTCTAGGA					
Consensus (3073)	CTAAATATGCTAATTAAGATCATTGGCAATTCTGTGGGGCTCTAGGA					
						Section 66
(3121)	3121	3130	3140	3150		3168
ClareAJ251507 (2814)	AACCTCACCTTGGTGTGGCCATCATCGTCTTCATTGGCTGTGGTC					
huNallI18 (AK) (2657)	AACCTCACCTTGGTGTGGCCATCATCGTCTTCATTGGCTGTGGTC					
JeongAF225987 (3121)	AACCTCACCTTGGTGTGGCCATCATCGTCTTCATTGGCTGTGGTC					
Consensus (3121)	AACCTCACCTTGGTGTGGCCATCATCGTCTTCATTGGCTGTGGTC					
						Section 67
(3169)	3169	3180	3190	3200		3216
ClareAJ251507 (2862)	GGCATGCAGCTTTGGTAAGAGCTACAAAGAACATGTGTCTGCAAGATC					
huNallI18 (AK) (2705)	GGCATGCAGCTTTGGTAAGAGCTACAAAGAACATGTGTCTGCAAGATC					
JeongAF225987 (3169)	GGCATGCAGCTTTGGTAAGAGCTACAAAGAACATGTGTCTGCAAGATC					
Consensus (3169)	GGCATGCAGCTTTGGTAAGAGCTACAAAGAACATGTGTCTGCAAGATC					
						Section 68
(3217)	3217	3230	3240	3250		3264
ClareAJ251507 (2910)	AATGATGACTGTACGCTCCCACGGTGGCACATGAACGACTTCTTCCAC					
huNallI18 (AK) (2753)	AATGATGACTGTACGCTCCCACGGTGGCACATGAACGACTTCTTCCAC					
JeongAF225987 (3217)	AATGATGACTGTACGCTCCCACGGTGGCACATGAACGACTTCTTCCAC					
Consensus (3217)	AATGATGACTGTACGCTCCCACGGTGGCACATGAACGACTTCTTCCAC					
						Section 69
(3265)	3265	3270	3280	3290	3300	3312
ClareAJ251507 (2958)	TCCTTCCTGATTGTGTGTCCTGCTGTGGAGAGTGATAGAGACC					
huNallI18 (AK) (2801)	TCCTTCCTGATTGTGTGTCCTGCTGTGGAGAGTGATAGAGACC					
JeongAF225987 (3265)	TCCTTCCTGATTGTGTGTCCTGCTGTGGAGAGTGATAGAGACC					
Consensus (3265)	TCCTTCCTGATTGTGTGTCCTGCTGTGGAGAGTGATAGAGACC					
						Section 70
(3313)	3313	3320	3330	3340	3350	3360
ClareAJ251507 (3006)	ATGTGGGACTGTATGGAGGTCGCTGGCCAAACCATGTGCCTTATTGTT					
huNallI18 (AK) (2849)	ATGTGGGACTGTATGGAGGTCGCTGGCCAAACCATGTGCCTTATTGTT					
JeongAF225987 (3313)	ATGTGGGACTGTATGGAGGTCGCTGGCCAAACCATGTGCCTTATTGTT					
Consensus (3313)	ATGTGGGACTGTATGGAGGTCGCTGGCCAAACCATGTGCCTTATTGTT					

						Section 71
	(3361)	3361	3370	3380	3390	3408
ClareAJ251507	(3054)	TTCATGTTGGTCATGGCATTGGAAACCTTGTGGTTCTGAACCTCTTT				
huNalII18 (AK)	(2897)	TTCATGTTGGTCATGGCATTGGAAACCTTGTGGTTCTGAACCTCTTT				
JeongAF225987	(3361)	TTCATGTTGGTCATGGCATTGGAAACCTTGTGGTTCTGAACCTCTTT				
Consensus	(3361)	TTCATGTTGGTCATGGCATTGGAAACCTTGTGGTTCTGAACCTCTTT				
						Section 72
	(3409)	3409	3420	3430	3440	3456
ClareAJ251507	(3102)	CTGGCCTTATTGTTGAGTTCATTTAGCTCAGACAACCTTGCTGCTACT				
huNalII18 (AK)	(2945)	CTGGCCTTATTGTTGAGTTCATTTAGCTCAGACAACCTTGCTGCTACT				
JeongAF225987	(3409)	CTGGCCTTATTATTGAGTTCATTTAGCTCAGACAACCTTGCTGCTACT				
Consensus	(3409)	CTGGCCTTATTGTTGAGTTCATTTAGCTCAGACAACCTTGCTGCTACT				
						Section 73
	(3457)	3457	3470	3480	3490	3504
ClareAJ251507	(3150)	GATGATGACAATGAAATGAATAATCTGCAGATTGCAGTAGGAAGAATG				
huNalII18 (AK)	(2993)	GATGATGACAATGAAATGAATAATCTGCAGATTGCAGTAGGAAGAATG				
JeongAF225987	(3457)	GATGATGACAATGAAATGAATAATCTGCAGATTGCAGTAGGAAGAATG				
Consensus	(3457)	GATGATGACAATGAAATGAATAATCTGCAGATTGCAGTAGGAAGAATG				
						Section 74
	(3505)	3505	3510	3520	3530	3552
ClareAJ251507	(3198)	CAAAAGGGATTGATTATGTAAAAATAAGATGCAGGGAGTGTGTTCCAA				
huNalII18 (AK)	(3041)	CAAAAGGGATTGATTATGTAAAAATAAGATGCAGGGAGTGTGTTCCAA				
JeongAF225987	(3505)	CAAAAGGGATTGATTATGTAAAAATAAGATGCAGGGAGTGTGTTCCAA				
Consensus	(3505)	CAAAAGGGATTGATTATGTAAAAATAAGATGCAGGGAGTGTGTTCCAA				
						Section 75
	(3553)	3553	3560	3570	3580	3590
ClareAJ251507	(3246)	AAAGCCTTTAGAAAGCAGGAAAGTTATAGAAATCCATGAAGGCAAT				
huNalII18 (AK)	(3089)	AAAGCCTTTAGAAAGCAGGAAAGTTATAGAAATCCATGAAGGCAAT				
JeongAF225987	(3553)	AAAGCCTTTAGAAAGCAGGAAAGTTATAGAAATCCATGAAGGCAAT				
Consensus	(3553)	AAAGCCTTTAGAAAGCAGGAAAGTTATAGAAATCCATGAAGGCAAT				
						Section 76
	(3601)	3601	3610	3620	3630	3648
ClareAJ251507	(3294)	AAGATAGACAGCTGCATGTCCAATAACTTGTGAAATTGAAATAAGCAA				
huNalII18 (AK)	(3137)	AAGATAGACAGCTGCATGTCCAATAACTTGTGAAATTGAAATAAGCAA				
JeongAF225987	(3601)	AAGATAGACAGCTGCATGTCCAATAACTTGTGAAATTGAAATAAGCAA				
Consensus	(3601)	AAGATAGACAGCTGCATGTCCAATAACTTGTGAAATTGAAATAAGCAA				
						Section 77
	(3649)	3649	3660	3670	3680	3696
ClareAJ251507	(3342)	GAGCTTAATTATCTTAGAGATGGGAATGGAACCACCAAGTGGTAGGT				
huNalII18 (AK)	(3185)	GAGCTTAATTATCTTAGAGATGGGAATGGAACCACCAAGTGGTAGGT				
JeongAF225987	(3649)	GAGCTTAATTATCTTAGAGATGGGAATGGAACCACCAAGTGGTAGGT				
Consensus	(3649)	GAGCTTAATTATCTTAGAGATGGGAATGGAACCACCAAGTGGTAGGT				

Section 78						
(3697)	3697	3710	3720	3730	3740	3744
ClareAJ251507	(3390)	ACTGGAAGCAGTGTGAAAAATACGTAATCGATGAAAATGATTATATG				
huNallI18 (AK)	(3233)	ACTGGAAGCAGTGTGAAAAATACGTAATCGATGAAAATGATTATATG				
JeongAF225987	(3697)	ACTGGAAGCAGTGTGAAAAATACGTAATCGATGAAAATGATTATATG				
Consensus	(3697)	ACTGGAAGCAGTGTGAAAAATACGTAATCGATGAAAATGATTATATG				
Section 79						
(3745)	3745	3750	3760	3770	3780	3792
ClareAJ251507	(3438)	TCATTCATAAAACAACCCAGCCTCACCGTCACAGTGCCAATTGCTGTT				
huNallI18 (AK)	(3281)	TCATTCATAAAACAACCCAGCCTCACCGTCACAGTGCCAATTGCTGTT				
JeongAF225987	(3745)	TCATTCATAAAACAACCCAGCCTCACCGTCACAGTGCCAATTGCTGTT				
Consensus	(3745)	TCATTCATAAAACAACCCAGCCTCACCGTCACAGTGCCAATTGCTGTT				
Section 80						
(3793)	3793	3800	3810	3820	3830	3840
ClareAJ251507	(3486)	GGAGAGTCTGACTTTGAAAACCTTAATACTGAAGAGTTCAGCAGTGAG				
huNallI18 (AK)	(3329)	GGAGAGTCTGACTTTGAAAACCTTAATACTGAAGAGTTCAGCAGTGAG				
JeongAF225987	(3793)	GGAGAGTCTGACTTTGAAAACCTTAATACTGAAGAGTTCAGCAGTGAG				
Consensus	(3793)	GGAGAGTCTGACTTTGAAAACCTTAATACTGAAGAGTTCAGCAGTGAG				
Section 81						
(3841)	3841	3850	3860	3870	3880	3888
ClareAJ251507	(3534)	TCAGAACTAGAAGAAAGCAAAGAGAAATTAAATGCAACCAGCTCATCT				
huNallI18 (AK)	(3377)	TCAGAACTAGAAGAAAGCAAAGAGAAATTAAATGCAACCAGCTCATCT				
JeongAF225987	(3841)	TCAGAACTAGAAGAAAGCAAAGAGAAATTAAATGCAACCAGCTCATCT				
Consensus	(3841)	TCAGAACTAGAAGAAAGCAAAGAGAAATTAAATGCAACCAGCTCATCT				
Section 82						
(3889)	3889	3900	3910	3920	3930	3936
ClareAJ251507	(3582)	GAAGGAAGCACAGTTGATGTTGTTCTACCCCGAGAAGGTGAACAAAGCT				
huNallI18 (AK)	(3425)	GAAGGAAGCACAGTTGATGTTGTTCTACCCCGAGAAGGTGAACAAAGCT				
JeongAF225987	(3889)	GAAGGAAGCACAGTTGATGTTGTTCTACCCCGAGAAGGTGAACAAAGCT				
Consensus	(3889)	GAAGGAAGCACAGTTGATGTTGTTCTACCCCGAGAAGGTGAACAAAGCT				
Section 83						
(3937)	3937	3950	3960	3970	3980	3984
ClareAJ251507	(3630)	GAAACTGAACCCGAAGAAGAC	GT	TAAACCGGAAGCTGTTTACTGAA		
huNallI18 (AK)	(3473)	GAAACTGAACCCGAAGAAGAC	GT	TAAACCGGAAGCTGTTTACTGAA		
JeongAF225987	(3937)	GAAACTGAACCCGAAGAAGACTTAAACCGGAAGCTGTTTACTGAA				
Consensus	(3937)	GAAACTGAACCCGAAGAAGACCTTAAACCGGAAGCTGTTTACTGAA				
Section 84						
(3985)	3985	3990	4000	4010	4020	4032
ClareAJ251507	(3678)	GGATGTATTAAAAAGTTCCATTCTGTCAAGTAAGTACAGAAGAAGGC				
huNallI18 (AK)	(3521)	GGATGTATTAAAAAGTTCCATTCTGTCAAGTAAGTACAGAAGAAGGC				
JeongAF225987	(3985)	GGGTGTATTAAAAAGTTCCATTCTGTCAAGTAAGTACAGAAGAAGGC				
Consensus	(3985)	GGATGTATTAAAAAGTTCCATTCTGTCAAGTAAGTACAGAAGAAGGC				

Section 85						
(4033)	4033	4040	4050	4060	4070	4080
ClareAJ251507 (3726)	AAAGGGAAGATCTGGTGGAAATCTTCGAAAAACCTGCTACAGTATTGTT					
huNalII18 (AK) (3569)	AAAGGGAAGATCTGGTGGAAATCTTCGAAAAACCTGCTACAGTATTGTT					
JeongAF225987 (4033)	AAAGGGAAGATCTGGTGGAAATCTTCGAAAAACCTGCTACAGTATTGTT					
Consensus (4033)	AAAGGGAAGATCTGGTGGAAATCTTCGAAAAACCTGCTACAGTATTGTT					
Section 86						
(4081)	4081	4090	4100	4110		4128
ClareAJ251507 (3774)	GAGCACAACTGGTTGAGACTTCATTGTGTTCATGATCCTCTCAGT					
huNalII18 (AK) (3617)	GAGCACAACTGGTTGAGACTTCATTGTGTTCATGATCCTCTCAGT					
JeongAF225987 (4081)	GAGCACAACTGGTTGAGACTTCATTGTGTTCATGATCCTCTCAGT					
Consensus (4081)	GAGCACAACTGGTTGAGACTTCATTGTGTTCATGATCCTCTCAGT					
Section 87						
(4129)	4129	4140	4150	4160		4176
ClareAJ251507 (3822)	AGTGGTGCAATTGGCCTTTGAAGATATACATTGAACAGCGAAAGACT					
huNalII18 (AK) (3665)	AGTGGTGCAATTGGCCTTTGAAGATATACATTGAACAGCGAAAGACT					
JeongAF225987 (4129)	AGTGGTGCAATTGGCCTTTGAAGATATACATTGAACAGCGAAAGACT					
Consensus (4129)	AGTGGTGCAATTGGCCTTTGAAGATATACATTGAACAGCGAAAGACT					
Section 88						
(4177)	4177	4190	4200	4210		4224
ClareAJ251507 (3870)	ATCAAAACCAGCTAGAATATGCTGACAAAGTCTTACCTATATATTC					
huNalII18 (AK) (3713)	ATCAAAACCAGCTAGAATATGCTGACAAAGTCTTACCTATATATTC					
JeongAF225987 (4177)	ATCAAAACCAGCTAGAATATGCTGACAAAGTCTTACCTATATATTC					
Consensus (4177)	ATCAAAACCAGCTAGAATATGCTGACAAAGTCTTACCTATATATTC					
Section 89						
(4225)	4225	4230	4240	4250	4260	4272
ClareAJ251507 (3918)	ATTCTGGAAATGCTTCTCAAATGGGTTGCTTATGGATTCAAACATAT					
huNalII18 (AK) (3761)	ATTCTGGAAATGCTTCTCAAATGGGTTGCTTATGGATTCAAACATAT					
JeongAF225987 (4225)	ATTCTGGAAATGCTTCTCAAATGGGTTGCTTATGGATTCAAACATAT					
Consensus (4225)	ATTCTGGAAATGCTTCTCAAATGGGTTGCTTATGGATTCAAACATAT					
Section 90						
(4273)	4273	4280	4290	4300	4310	4320
ClareAJ251507 (3966)	TTCACTAATGCCTGGTGCTGGCTAGATTCTGATCGTTGATGTTCT					
huNalII18 (AK) (3809)	TTCACTAATGCCTGGTGCTGGCTAGATTCTGATCGTTGATGTTCT					
JeongAF225987 (4273)	TTCACTAATGCCTGGTGCTGGCTAGATTCTGATCGTTGATGTTCT					
Consensus (4273)	TTCACTAATGCCTGGTGCTGGCTAGATTCTGATCGTTGATGTTCT					
Section 91						
(4321)	4321	4330	4340	4350		4368
ClareAJ251507 (4014)	TTGGTTAGCCTGGTAGCCAATGCTCTGGCTACTCAGAACTCGGTGCC					
huNalII18 (AK) (3857)	TTGGTTAGCCTGGTAGCCAATGCTCTGGCTACTCAGAACTCGGTGCC					
JeongAF225987 (4321)	TTGGTTAGCCTGGTAGCCAATGCTCTGGCTACTCAGAACTCGGTGCC					
Consensus (4321)	TTGGTTAGCCTGGTAGCCAATGCTCTGGCTACTCAGAACTCGGTGCC					

						Section 92
	(4369) 4369	4380	4390	4400	4416	
ClareAJ251507 (4062)	ATCAAATCATTACGGACATTAAGAGCTTAAAGACCTCTAAGAGCCTTA					
huNalII18 (AK) (3905)	ATCAAATCATTACGGACATTAAGAGCTTAAAGACCTCTAAGAGCCTTA					
JeongAF225987 (4369)	ATCAAATCATTACGGACATTAAGAGCTTAAAGACCTCTAAGAGCCTTA					
Consensus (4369)	ATCAAATCATTACGGACATTAAGAGCTTAAAGACCTCTAAGAGCCTTA					
						Section 93
	(4417) 4417	4430	4440	4450	4464	
ClareAJ251507 (4110)	TCCC GGTTTGAAGGCATGAGGGTGGTGTGAATGCTCTTGGAGCA					
huNalII18 (AK) (3953)	TCCC GGTTTGAAGGCATGAGGGTGGTGTGAATGCTCTTGGAGCA					
JeongAF225987 (4417)	TCCC GGTTTGAAGGCATGAGGGTGGTGTGAATGCTCTTGGAGCA					
Consensus (4417)	TCCC GGTTTGAAGGCATGAGGGTGGTGTGAATGCTCTTGGAGCA					
						Section 94
	(4465) 4465	4470	4480	4490	4500	4512
ClareAJ251507 (4158)	ATTCC CTC TATCATGAATGTGCTGTTGGTCTGTCTCATCTTCTGGTTG					
huNalII18 (AK) (4001)	ATTCC CTC TATCATGAATGTGCTGTTGGTCTGTCTCATCTTCTGGTTG					
JeongAF225987 (4465)	ATTCC CTC TATCATGAATGTGCTGTTGGTCTGTCTCATCTTCTGGTTG					
Consensus (4465)	ATTCC CTC TATCATGAATGTGCTGTTGGTCTGTCTCATCTTCTGGTTG					
						Section 95
	(4513) 4513	4520	4530	4540	4550	4560
ClareAJ251507 (4206)	ATCTTTAGCATCATGGGTGTGAATTGTTGCTGGCAAGTTCTACAC					
huNalII18 (AK) (4049)	ATCTTTAGCATCATGGGTGTGAATTGTTGCTGGCAAGTTCTACAC					
JeongAF225987 (4513)	ATCTTTAGCATCATGGGTGTGAATTGTTGCTGGCAAGTTCTACAC					
Consensus (4513)	ATCTTTAGCATCATGGGTGTGAATTGTTGCTGGCAAGTTCTACAC					
						Section 96
	(4561) 4561	4570	4580	4590	4608	
ClareAJ251507 (4254)	TGTGTTAACATGACAACGGGTAACATGTTGACATTAGTGATGTTAAC					
huNalII18 (AK) (4097)	TGTGTTAACATGACAACGGGTAACATGTTGACATTAGTGATGTTAAC					
JeongAF225987 (4561)	TGTGTTAACATGACAACGGGTAACATGTTGACATTAGTGATGTTAAC					
Consensus (4561)	TGTGTTAACATGACAACGGGTAACATGTTGACATTAGTGATGTTAAC					
						Section 97
	(4609) 4609	4620	4630	4640	4656	
ClareAJ251507 (4302)	AATTTGAGTGACTGTCAGGCCTTGGCAAGCAAGCTCGGTGGAAAAAC					
huNalII18 (AK) (4145)	AATTTGAGTGACTGTCAGGCCTTGGCAAGCAAGCTCGGTGGAAAAAC					
JeongAF225987 (4609)	AATTTGAGTGACTGTCAGGCCTTGGCAAGCAAGCTCGGTGGAAAAAC					
Consensus (4609)	AATTTGAGTGACTGTCAGGCCTTGGCAAGCAAGCTCGGTGGAAAAAC					
						Section 98
	(4657) 4657	4670	4680	4690	4704	
ClareAJ251507 (4350)	GTGAAAGTAAACTTGATAATGTTGGCGCTGGCTATCTTGCACTGCTT					
huNalII18 (AK) (4193)	GTGAAAGTAAACTTGATAATGTTGGCGCTGGCTATCTTGCACTGCTT					
JeongAF225987 (4657)	GTGAAAGTAAACTTGATAATGTTGGCGCTGGCTATCTTGCACTGCTT					
Consensus (4657)	GTGAAAGTAAACTTGATAATGTTGGCGCTGGCTATCTTGCACTGCTT					

Section 99						
(4705)	4705	4710	4720	4730	4740	4752
ClareAJ251507 (4398)	CAAGTGGCCACATTTAAAGGCTGGATGGATATTATGTATGCAGCTGTT					
huNalII18 (AK) (4241)	CAAGTGGCCACATTTAAAGGCTGGATGGATATTATGTATGCAGCTGTT					
JeongAF225987 (4705)	CAAGTGGCCACATTTAAAGGCTGGATGGATATTATGTATGCAGCTGTT					
Consensus (4705)	CAAGTGGCCACATTTAAAGGCTGGATGGATATTATGTATGCAGCTGTT					
Section 100						
(4753)	4753	4760	4770	4780	4790	4800
ClareAJ251507 (4446)	GATTCACGAGATGTTAAACTCAGCCTGTATATGAAGAAAATCTGTAC					
huNalII18 (AK) (4289)	GATTCACGAGATGTTAAACTCAGCCTGTATATGAAGAAAATCTGTAC					
JeongAF225987 (4753)	GATTCACGAGATGTTAAACTCAGCCTGTATATGAAGAAAATCTGTAC					
Consensus (4753)	GATTCACGAGATGTTAAACTCAGCCTGTATATGAAGAAAATCTGTAC					
Section 101						
(4801)	4801	4810	4820	4830		4848
ClareAJ251507 (4494)	ATGTATTTATACTTGTCATCTTATCATCTTGGGTCAATTCTCACT					
huNalII18 (AK) (4337)	ATGTATTTATACTTGTCATCTTATCATCTTGGGTCAATTCTCACT					
JeongAF225987 (4801)	ATGTATTTATACTTGTCATCTTATCATCTTGGGTCAATTCTCACT					
Consensus (4801)	ATGTATTTATACTTGTCATCTTATCATCTTGGGTCAATTCTCACT					
Section 102						
(4849)	4849	4860	4870	4880		4896
ClareAJ251507 (4542)	CTGAATCTATTCAATTGGTGTCAATAGATAACTTCAACCAGCAGAAA					
huNalII18 (AK) (4385)	CTGAATCTATTCAATTGGTGTCAATAGATAACTTCAACCAGCAGAAA					
JeongAF225987 (4849)	CTGAATCTATTCAATTGGTGTCAATAGATAACTTCAACCAGCAGAAA					
Consensus (4849)	CTGAATCTATTCAATTGGTGTCAATAGATAACTTCAACCAGCAGAAA					
Section 103						
(4897)	4897	4910	4920	4930		4944
ClareAJ251507 (4590)	AAGAAGTTGGAGGTCAAGACATCTTATGACAGAGGAACAGAAAAAAA					
huNalII18 (AK) (4433)	AAGAAGTTGGAGGTCAAGACATCTTATGACAGAGGAACAGAAAAAAA					
JeongAF225987 (4897)	AAGAAGTTGGAGGTCAAGACATCTTATGACAGAGGAACAGAAAAAAA					
Consensus (4897)	AAGAAGTTGGAGGTCAAGACATCTTATGACAGAGGAACAGAAAAAAA					
Section 104						
(4945)	4945	4950	4960	4970	4980	4992
ClareAJ251507 (4638)	TATTACAATGCAATGAAGAAACTTGGATCCAAGAACCTCAGAAACCC					
huNalII18 (AK) (4481)	TATTACAATGCAATGAAGAAACTTGGATCCAAGAACCTCAGAAACCC					
JeongAF225987 (4945)	TATTACAATGCAATGAAGAAACTTGGATCCAAGAACCTCAGAAACCC					
Consensus (4945)	TATTACAATGCAATGAAGAAACTTGGATCCAAGAACCTCAGAAACCC					
Section 105						
(4993)	4993	5000	5010	5020	5030	5040
ClareAJ251507 (4686)	ATACCTCGCCCAGCAAACAAATTCCAAGGAATGGTCTTGATTTGTA					
huNalII18 (AK) (4529)	ATACCTCGCCCAGCAAACAAATTCCAAGGAATGGTCTTGATTTGTA					
JeongAF225987 (4993)	ATACCTCGCCCAGCAAACAAATTCCAAGGAATGGTCTTGATTTGTA					
Consensus (4993)	ATACCTCGCCCAGCAAACAAATTCCAAGGAATGGTCTTGATTTGTA					

						Section 106
(5041)	5041	5050	5060	5070	5088	
ClareAJ251507 (4734)	ACCAAGACAAGTCTTGATATCAGCATCATGATCCTCATCTGCCTCAAC					
huNalII18 (AK) (4577)	ACCAAGACAAGTCTTGATATCAGCATCATGATCCTCATCTGCCTCAAC					
JeongAF225987 (5041)	ACCAAGACAAGTCTTGATATCAGCATCATGATCCTCATCTGCCTCAAC					
Consensus (5041)	ACCAAGACAAGTCTTGATATCAGCATCATGATCCTCATCTGCCTCAAC					
						Section 107
(5089)	5089	5100	5110	5120	5136	
ClareAJ251507 (4782)	ATGGTCACCAGTATGGTGGAAACGGATGACCAGGGCAAATACTGACC					
huNalII18 (AK) (4625)	ATGGTCACCAGTATGGTGGAAACGGATGACCAGGGCAAATACTGACC					
JeongAF225987 (5089)	ATGGTCACCAGTATGGTGGAAACGGATGACCAGGGCAAATACTGACC					
Consensus (5089)	ATGGTCACCAGTATGGTGGAAACGGATGACCAGGGCAAATACTGACC					
						Section 108
(5137)	5137	5150	5160	5170	5184	
ClareAJ251507 (4830)	CTAGTTTGTCCCAGATCAACCTAGTGTTCATTGTTCTGTTCACTGGA					
huNalII18 (AK) (4673)	CTAGTTTGTCCCAGATCAACCTAGTGTTCATTGTTCTGTTCACTGGA					
JeongAF225987 (5137)	CTAGTTTGTCCCAGATCAACCTAGTGTTCATTGTTCTGTTCACTGGA					
Consensus (5137)	CTAGTTTGTCCCAGATCAACCTAGTGTTCATTGTTCTGTTCACTGGA					
						Section 109
(5185)	5185	5190	5200	5210	5220	5232
ClareAJ251507 (4878)	GAATTTGTGCTGAAGCTCGTCTCCCTCAGACACTACTACTTCACTATA					
huNalII18 (AK) (4721)	GAATTTGTGCTGAGGCTCGTCTCCCTCAGACACTACTACTTCACTATA					
JeongAF225987 (5185)	GAATTTGTGCTGAAGCTCGTCTCCCTCAGACACTACTACTTCACTATA					
Consensus (5185)	GAATTTGTGCTGAAGCTCGTCTCCCTCAGACACTACTACTTCACTATA					
						Section 110
(5233)	5233	5240	5250	5260	5270	5280
ClareAJ251507 (4926)	GGCTGGAACATCTTGACTTTGACTTGTGGTGGTGAATTCTCTCCATTGTAGGT					
huNalII18 (AK) (4769)	GGCTGGAACATCTTGACTTTGACTTGTGGTGGTGAATTCTCTCCATTGTAGGT					
JeongAF225987 (5233)	GGCTGGAACATCTTGACTTTGACTTGTGGTGGTGAATTCTCTCCATTGTAGGT					
Consensus (5233)	GGCTGGAACATCTTGACTTTGACTTGTGGTGGTGAATTCTCTCCATTGTAGGT					
						Section 111
(5281)	5281	5290	5300	5310	5328	
ClareAJ251507 (4974)	ATGTTTCTGGCTGAGATGATAGAAAAGTATTGTGTCCCCAACCTTG					
huNalII18 (AK) (4817)	ATGTTTCTGGCTGAGATGATAGAAAAGTATTGTGTCCCCAACCTTG					
JeongAF225987 (5281)	ATGTTTCTGGCTGAGATGATAGAAAAGTATTGTGTCCCCAACCTTG					
Consensus (5281)	ATGTTTCTGGCTGAGATGATAGAAAAGTATTGTGTCCCCAACCTTG					
						Section 112
(5329)	5329	5340	5350	5360	5376	
ClareAJ251507 (5022)	TTCCGAGTGATCCGTCTGCCAGGATTGGCCGAATCCTACGTCTGATC					
huNalII18 (AK) (4865)	TTCCGAGTGATCCGTCTGCCAGGATTGGCCGAATCCTACGTCTGATC					
JeongAF225987 (5329)	TTCCGAGTGATCCGTCTGCCAGGATTGGCCGAATCCTACGTCTGATC					
Consensus (5329)	TTCCGAGTGATCCGTCTGCCAGGATTGGCCGAATCCTACGTCTGATC					

Section 113						
(5377)	5377	5390	5400	5410	5424	
ClareAJ251507	(5070)	AAAGGAGCAAAGGGATCCGCACGCTGCTTTGCTTGATGATGTCC				
huNallI18 (AK)	(4913)	AAAGGAGCAAAGGGATCCGCACGCTGCTTTGCTTGATGATGTCC				
JeongAF225987	(5377)	AAAGGAGCAAAGGGATCCGCACGCTGCTTTGCTTGATGATGTCC				
Consensus	(5377)	AAAGGAGCAAAGGGATCCGCACGCTGCTTTGCTTGATGATGTCC				
Section 114						
(5425)	5425	5430	5440	5450	5460	5472
ClareAJ251507	(5118)	CTTCCTGCCTTGTAAACATCGGCCTCCTGCTCTTCTGGTCATGTTT				
huNallI18 (AK)	(4961)	CTTCCTGCCTTGTAAACATCGGCCTCCTGCTCTTCTGGTCATGTTT				
JeongAF225987	(5425)	CTTCCTGCCTTGTAAACATCGGCCTCCTGCTCTTCTGGTCATGTTT				
Consensus	(5425)	CTTCCTGCCTTGTAAACATCGGCCTCCTGCTCTTCTGGTCATGTTT				
Section 115						
(5473)	5473	5480	5490	5500	5510	5520
ClareAJ251507	(5166)	ATCTATGCCATCTTGGATGTCCAACCTTGCTATGTTAAAAAGGAA				
huNallI18 (AK)	(5009)	ATCTATGCCATCTTGGATGTCCAACCTTGCTATGTTAAAAAGGAA				
JeongAF225987	(5473)	ATCTATGCCATCTTGGATGTCCAACCTTGCTATGTTAAAAAGGAA				
Consensus	(5473)	ATCTATGCCATCTTGGATGTCCAACCTTGCTATGTTAAAAAGGAA				
Section 116						
(5521)	5521	5530	5540	5550	5560	5568
ClareAJ251507	(5214)	GCTGGAATTGATGACATGTCACCTTGAGACCTTGGCAACAGCATG				
huNallI18 (AK)	(5057)	GCTGGAATTGATGACATGTCACCTTGAGACCTTGGCAACAGCATG				
JeongAF225987	(5521)	GCTGGAATTGATGACATGTCACCTTGAGACCTTGGCAACAGCATG				
Consensus	(5521)	GCTGGAATTGATGACATGTCACCTTGAGACCTTGGCAACAGCATG				
Section 117						
(5569)	5569	5580	5590	5600	5610	5616
ClareAJ251507	(5262)	ATCTGCTTGTCAAATTACAACCTCTGCTGGCTGGATGGATTGCTA				
huNallI18 (AK)	(5105)	ATCTGCTTGTCAAATTACAACCTCTGCTGGCTGGATGGATTGCTA				
JeongAF225987	(5569)	ATCTGCTTGTCAAATTACAACCTCTGCTGGCTGGATGGATTGCTA				
Consensus	(5569)	ATCTGCTTGTCAAATTACAACCTCTGCTGGCTGGATGGATTGCTA				
Section 118						
(5617)	5617	5630	5640	5650	5660	5664
ClareAJ251507	(5310)	GCACCTATTCTTAATAGTCACCACCCGACTGTGACCCCTGACACAATT				
huNallI18 (AK)	(5153)	GCACCTATTCTTAATAGTCACCACCCGACTGTGACCCCTGACACAATT				
JeongAF225987	(5617)	GCACCTATTCTTAATAGTCACCACCCGACTGTGACCCCTGACACAATT				
Consensus	(5617)	GCACCTATTCTTAATAGTCACCACCCGACTGTGACCCCTGACACAATT				
Section 119						
(5665)	5665	5670	5680	5690	5700	5712
ClareAJ251507	(5358)	CACCCCTGGCAGCTCAGTTAAGGGAGACGTGGGACCCATCTGTTGGG				
huNallI18 (AK)	(5201)	CACCCCTGGCAGCTCAGTTAAGGGAGACGTGGGACCCATCTGTTGGG				
JeongAF225987	(5665)	CACCCCTGGCAGCTCAGTTAAGGGAGACCGTGGGACCCATCTGTTGGG				
Consensus	(5665)	CACCCCTGGCAGCTCAGTTAAGGGAGACTGTGGGACCCATCTGTTGGG				

Section 120						
(5713)	5713	5720	5730	5740	5750	5760
ClareAJ251507 (5406)	ATTTCTTTTCGTCAGTTACATCATCATATCCTCCTGGTTGTGGTG					
huNalII18 (AK) (5249)	ATTTCTTTTCGTCAGTTACATCATCATATCCTCCTGGTTGTGGTG					
JeongAF225987 (5713)	ATTTCTTTTCGTCAGTTACATCATCATATCCTCCTGGTTGTGGTG					
Consensus (5713)	ATTTCTTTTCGTCAGTTACATCATCATATCCTCCTGGTTGTGGTG					
Section 121						
(5761)	5761	5770	5780	5790		5808
ClareAJ251507 (5454)	AACATGTACATCGCGGTACATCCTGGAGAACTTCAGTGGCTACTGAA					
huNalII18 (AK) (5297)	AACATGTACATCGCGGTACATCCTGGAGAACTTCAGTGGCTACTGAA					
JeongAF225987 (5761)	AACATGTACATCGCGGTACATCCTGGAGAACTTCAGTGGCTACTGAA					
Consensus (5761)	AACATGTACATCGCGGTACATCCTGGAGAACTTCAGTGGCTACTGAA					
Section 122						
(5809)	5809	5820	5830	5840		5856
ClareAJ251507 (5502)	GAAAGTGCAGAGCCCCCTGAGTGAGGATGACTTGAGATGTTCTATGAG					
huNalII18 (AK) (5345)	GAAAGTGCAGAGCCCCCTGAGTGAGGATGACTTGAGATGTTCTATGAG					
JeongAF225987 (5809)	GAAAGTGCAGAGCCCCCTGAGTGAGGATGACTTGAGATGTTCTATGAG					
Consensus (5809)	GAAAGTGCAGAGCCCCCTGAGTGAGGATGACTTGAGATGTTCTATGAG					
Section 123						
(5857)	5857	5870	5880	5890		5904
ClareAJ251507 (5550)	GTTGGGAAAAGTTGATCCGATGCGACCCAGTTATAGAGTTCTCT					
huNalII18 (AK) (5393)	GTTGGGAAAAGTTGATCCGATGCGACCCAGTTATAGAGTTCTCT					
JeongAF225987 (5857)	GTTGGGAAAAGTTGATCCGATGCGACCCAGTTATAGAGTTCTCT					
Consensus (5857)	GTTGGGAAAAGTTGATCCGATGCGACCCAGTTATAGAGTTCTCT					
Section 124						
(5905)	5905	5910	5920	5930	5940	5952
ClareAJ251507 (5598)	AAACTCTCTGATTTCGAGCTGCCCTGGATCCTCCTCTCATAGCA					
huNalII18 (AK) (5441)	AAACTCTCTGATTTCGAGCTGCCCTGGATCCTCCTCTCATAGCA					
JeongAF225987 (5905)	AAACTCTCTGATTTCGAGCTGCCCTGGATCCTCCTCTCATAGCA					
Consensus (5905)	AAACTCTCTGATTTCGAGCTGCCCTGGATCCTCCTCTCATAGCA					
Section 125						
(5953)	5953	5960	5970	5980	5990	6000
ClareAJ251507 (5646)	AAACCCAACAAAGTCCAGCTTATTGCCATGGATCTGCCCATGGTCAGT					
huNalII18 (AK) (5489)	AAACCCAACAAAGTCCAGCTTATTGCCATGGATCTGCCCATGGTCAGT					
JeongAF225987 (5953)	AAACCCAACAAAGTCCAGCTTATTGCCATGGATCTGCCCATGGTCAGT					
Consensus (5953)	AAACCCAACAAAGTCCAGCTTATTGCCATGGATCTGCCCATGGTCAGT					
Section 126						
(6001)	6001	6010	6020	6030		6048
ClareAJ251507 (5694)	GGTGACCGGATCCACTGTCTTGATATTTATTCGCTTACAAAGCGT					
huNalII18 (AK) (5537)	GGTGACCGGATCCACTGTCTTGATATTTATTCGCTTACAAAGCGT					
JeongAF225987 (6001)	GGTGACCGGATCCACTGTCTTGATATTTATTCGCTTACAAAGCGT					
Consensus (6001)	GGTGACCGGATCCACTGTCTTGATATTTATTCGCTTACAAAGCGT					

						Section 127
(6049)	6049	6060	6070	6080	6096	
ClareAJ251507 (5742)	GT	TGAGAGTGGAGAGATGGATGCCCTTCGAATA	CAGATGGAA			
huNalll18 (AK) (5585)	GT	TGAGAGTGGAGAGATGGATGCCCTTCGAATA	CAGATGGAA			
JeongAF225987 (6049)	GT	TTGTGAGAGTGGAGAGATGGATGCCCTTCGAATA	CAGATGGAA			
Consensus (6049)	GT	TTGGTGAGAGTGGAGAGATGGATGCCCTTCGAATA	CAGATGGAA			
						Section 128
(6097)	6097	6110	6120	6130	6144	
ClareAJ251507 (5790)	GACAGGTTTATGGCATCAAACCCCTCCAAAGTCTCTTATGAGCCTATT					
huNalll18 (AK) (5633)	GACAGGTTTATGGCATCAAACCCCTCCAAAGTCTCTTATGAGCCTATT					
JeongAF225987 (6097)	GACAGGTTTATGGCATCAAACCCCTCCAAAGTCTCTTATGAGCCTATT					
Consensus (6097)	GACAGGTTTATGGCATCAAACCCCTCCAAAGTCTCTTATGAGCCTATT					
						Section 129
(6145)	6145	6150	6160	6170	6180	6192
ClareAJ251507 (5838)	ACAACCACTTGAAACGTAAACAAGAGGAGGTGTGCCGCTATCATT					
huNalll18 (AK) (5681)	ACAACCACTTGAAACGTAAACAAGAGGAGGTGTGCCGCTATCATT					
JeongAF225987 (6145)	ACAACCACTTGAAACGTAAACAAGAGGAGGTGTGCCGCTATCATT					
Consensus (6145)	ACAACCACTTGAAACGTAAACAAGAGGAGGTGTGCCGCTATCATT					
						Section 130
(6193)	6193	6200	6210	6220	6230	6240
ClareAJ251507 (5886)	CAGCGTAATTCAGATGTTATCTTTAAAGCAAAGGTTAAAAAATATA					
huNalll18 (AK) (5729)	CAGCGTAATTCAGATGTTATCTTTAAAGCAAAGGTTAAAAAATATA					
JeongAF225987 (6193)	CAGCGTAATTCAGATGTTATCTTTAAAGCAAAGGTTAAAAAATATA					
Consensus (6193)	CAGCGTAATTCAGATGTTATCTTTAAAGCAAAGGTTAAAAAATATA					
						Section 131
(6241)	6241	6250	6260	6270	6288	
ClareAJ251507 (5934)	TCAAGTAACTATAACAAAGAGGCAATTAAAGGGAGGATTGACTTACCT					
huNalll18 (AK) (5777)	TCAAGTAACTATAACAAAGAGGCAATTAAAGGGAGGATTGACTTACCT					
JeongAF225987 (6241)	TCAAGTAACTATAACAAAGAGGCAATTAAAGGGAGGATTGACTTACCT					
Consensus (6241)	TCAAGTAACTATAACAAAGAGGCAATTAAAGGGAGGATTGACTTACCT					
						Section 132
(6289)	6289	6300	6310	6320	6336	
ClareAJ251507 (5982)	ATAAAAACAAGACATGATTATTGACAAACTAAATGGGAAC	CTCC	CTCC	CTCC	CTCC	ACTCCA
huNalll18 (AK) (5825)	ATAAAAACAAGACATGATTATTGACAAACTAAATGGGAAC	CTCC	CTCC	CTCC	CTCC	ACTCCA
JeongAF225987 (6289)	ATAAAAACAAGACATGATTATTGACAAACTAAATGGGAAC	CTCC	CTCC	CTCC	CTCC	ACTCCA
Consensus (6289)	ATAAAAACAAGACATGATTATTGACAAACTAAATGGGAAC	CTCC	CTCC	CTCC	CTCC	ACTCCA
						Section 133
(6337)	6337	6350	6360	6370	6384	
ClareAJ251507 (6030)	GAAAAAACAGATGGGAGTCCCTCTACCAC	CTC	CTC	CTC	CTC	CTTCTATGAT
huNalll18 (AK) (5873)	GAAAAAACAGATGGGAGTCCCTCTACCAC	CTC	CTC	CTC	CTC	CTTCTATGAT
JeongAF225987 (6337)	GAAAAAACAGATGGGAGTCCCTCTACCAC	CTC	CTC	CTC	CTC	CTTCTATGAT
Consensus (6337)	GAAAAAACAGATGGGAGTCCCTCTACCAC	CTC	CTC	CTC	CTC	CTTCTATGAT

Section 134						
	(6385)	6385	6390	6400	6410	6420
ClareAJ251507 (6078)	AGTGTAA	CAAAACCAGACAAGGAAA	AGTTGAGAAAGACAAACCAGAA			6432
huNallI18 (AK) (5921)	AGTGTAA	CAAAACCAGACAAGGAAA	AGTTGAGAAAGACAAACCAGAA			
JeongAF225987 (6385)	AGTGTAA	CAAAACCAGACAAGGAAA	AGTTGAGAAAGACAAACCAGAA			
Consensus (6385)	AGTGTAA	CAAAACCAGACAAGGAAA	AGTTGAGAAAGACAAACCAGAA			
Section 135						
	(6433)	6433	6440	6450	6460	6470
ClareAJ251507 (6126)	AAAGAAAGC	AAAGGAAAAGAGGT	CAGAGAAAATCAAAGTAAAAAGAA			6480
huNallI18 (AK) (5969)	AAAGAAAGC	AAAGGAAAAGAGGT	CAGAGAAAATCAAAGTAAAAAGAA			
JeongAF225987 (6433)	AAAGAAAGC	AAAGGAAAAGAGGT	CAGAGAAAATCAAAGTAAAAAGAA			
Consensus (6433)	AAAGAAAGC	AAAGGAAAAGAGGT	CAGAGAAAATCAAAGTAAAAAGAA			
Section 136						
	(6481)	6481	6490	6500	6510	6528
ClareAJ251507 (6174)	ACAAAGAATT	TATCTTGTGATCAATTGTTACAGCCTATGAAGGTAAA				
huNallI18 (AK) (6017)	ACAAAGAATT	TATCTTGTGATCAATTGTTACAGCCTATGAAGGTAAA				
JeongAF225987 (6481)	ACAAAGAATT	TATCTTGTGATCAATTGTTACAGCCTATGAAGGTAAA				
Consensus (6481)	ACAAAGAATT	TATCTTGTGATCAATTGTTACAGCCTATGAAGGTAAA				
Section 137						
	(6529)	6529	6540	6550	6560	6576
ClareAJ251507 (6222)	GTATATGTGTC	AACTGGACTTCAAG	AGGAGCGTGAAAGCTGAGGAA			
huNallI18 (AK) (6065)	GTATATGTGTC	AACTGGACTTCAAG				
JeongAF225987 (6529)	GTATATGTGTC	AACTGGACTTCAAG	AGGAGCGTGAAAGCTGAGGAA			
Consensus (6529)	GTATATGTGTC	AACTGGACTTCAAGAGGAGGTCCATGCCAAACTGACT				
Section 138						
	(6577)	6577	6590	6600	6610	6624
ClareAJ251507 (6270)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
huNallI18 (AK) (6090)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
JeongAF225987 (6577)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
Consensus (6577)	GT	TTTAACAAATACTCATAGTCAGTGCCTATACAAGACAGTGAAGTGA				
Section 139						
	(6625)	6625	6630	6640	6650	6660
ClareAJ251507 (6318)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
huNallI18 (AK) (6090)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
JeongAF225987 (6625)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
Consensus (6625)	CCTCTCTGTC	ACTGCAACTCTGTGAAGCAGGGTATCAAC	TTGACAAG			
Section 140						
	(6673)	6673	6680	6690	6700	6710
ClareAJ251507 (6366)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
huNallI18 (AK) (6090)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
JeongAF225987 (6673)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
Consensus (6673)	AGGTTGCT	TTTTATTACCA	GCTGACACTGCTGAGGAGAACCCAAT			

						Section 141
	(6721)	6721	6730	6740	6750	6768
ClareAJ251507 (6414)						
huNall18 (AK) (6090)						
JeongAF225987 (6721)						
Consensus (6721)	GGCTACCTAGACTATAGGGATAGTTGTGCAAAGTGAACATTGTA	ACTA				
						Section 142
	(6769)	6769	6780	6790	6800	6816
ClareAJ251507 (6462)						
huNall18 (AK) (6090)						
JeongAF225987 (6769)						
Consensus (6769)	CACCAAAACACCTT	AGTAGTCCTGCATCCATTCTATT	TTAACTT			
						Section 143
	(6817)	6817	6830	6840	6850	6864
ClareAJ251507 (6510)						
huNall18 (AK) (6090)						
JeongAF225987 (6817)						
Consensus (6817)	CCATATCTGCCAT	ATTTACAAAATTGTTCTAGTC	ATTCATGG			
						Section 144
	(6865)	6865	6870	6880	6890	6900
ClareAJ251507 (6558)						
huNall18 (AK) (6090)						
JeongAF225987 (6865)						
Consensus (6865)	TCCCCAATT	CATA	AGTTATT	CATA	ATGCTATGTC	ACTATT
						Section 145
	(6913)	6913	6920	6930	6940	6950
ClareAJ251507 (6600)						
huNall18 (AK) (6090)						
JeongAF225987 (6913)						
Consensus (6913)	TGAGGTTACGTT	GAAGAACAGT	TACAAGAACCC	GTCTCT	CAAAT	
						Section 146
	(6961)	6961	6970	6980	6990	7008
ClareAJ251507 (6600)						
huNall18 (AK) (6090)						
JeongAF225987 (6961)						
Consensus (6961)	GATCAGACAAAGGT	GT	TTGCCAGAGAGATA	AAAATT	TTTGCT	CAAAAC
						Section 147
	(7009)	7009	7020	7030	7040	7056
ClareAJ251507 (6600)						
huNall18 (AK) (6090)						
JeongAF225987 (7009)						
Consensus (7009)	CAGAAAAAGAATT	GTAATGGCTACAGTT	CAGTTACT	CCATT	TTCTA	

						Section 148
	(7057)	7057	7070	7080	7090	7104
ClareAJ251507 (6600)		-----				
huNalII18 (AK) (6090)		-----				
JeongAF225987	(7057)	GATGGCTTAATTTGAAAGTATTTAGTCTGTTATGTTGTTCTAT				
Consensus (7057)						
						Section 149
	(7105)	7105	7110	7120	7130	7140
ClareAJ251507 (6600)		-----				
huNalII18 (AK) (6090)		-----				
JeongAF225987	(7105)	CTGAACAGTTATGTGCCTGTAAAGTCTCCTCTAATATTAAAGGATTA				
Consensus (7105)						
						Section 150
	(7153)	7153	7160	7170	7180	7190
ClareAJ251507 (6600)		-----				
huNalII18 (AK) (6090)		-----				
JeongAF225987	(7153)	TTTTTATGCAAAGTATTCTGTTCAGCAAGTGCAAATTATTCTAAG				
Consensus (7153)						
						Section 151
	(7201)	7201	7210	7220	7230	7248
ClareAJ251507 (6600)		-----				
huNalII18 (AK) (6090)		-----				
JeongAF225987	(7201)	TTTCAGAGCTCTATATTAAATTAGGTCAAATGCTTCCAAAAAGTAA				
Consensus (7201)						
						Section 152
	(7249)	7249	7260	7270	7280	7296
ClareAJ251507 (6600)		-----				
huNalII18 (AK) (6090)		-----				
JeongAF225987	(7249)	TCTAATAAAATCCATTCTAGAAAAATATATCTAAAGTATTGCTTAGAA				
Consensus (7249)						
						Section 153
	(7297)	7297	7310	7320	7330	7344
ClareAJ251507 (6600)		-----				
huNalII18 (AK) (6090)		-----				
JeongAF225987	(7297)	TAGTTGTTCCACTTCTGCTGCAGTATTGCTTGCATCTCTGCTCT				
Consensus (7297)						
						Section 154
	(7345)	7345	7350	7360	7370	7380
ClareAJ251507 (6600)		-----				
huNalII18 (AK) (6090)		-----				
JeongAF225987	(7345)	CAGCAAAGCTGATAGTCTATGTCAATTAAACCCATGTTATGTAAA				
Consensus (7345)						

Section 155							
	(7393)	7393	7400	7410	7420	7430	7440
ClareAJ251507	(6600)	-----					
huNalII18 (AK)	(6090)	-----					
JeongAF225987	(7393)	TAGTTATTTATCCTGTGGTCATGTTGGCAAATATATATAGCC					
Consensus (7393)							
Section 156							
	(7441)	7441	7450	7460	7470		7488
ClareAJ251507	(6600)	-----					
huNalII18 (AK)	(6090)	-----					
JeongAF225987	(7441)	TGATAAACAACTTCTATTAAATCAAATATGTACCAACAGTGTATGTGTC					
Consensus (7441)							
Section 157							
	(7489)	7489	7500	7510	7520		7536
ClareAJ251507	(6600)	-----					
huNalII18 (AK)	(6090)	-----					
JeongAF225987	(7489)	TTTGCAAGCTTCAACAGGGATGTATCCTGTATCATTCATTAAACAT					
Consensus (7489)							
Section 158							
	(7537)	7537	7550	7560	7570		7584
ClareAJ251507	(6600)	-----					
huNalII18 (AK)	(6090)	-----					
JeongAF225987	(7537)	AGTTAAAGGCTATCACTAATGCATGTTAATATTGCCTATGCTGCTCT					
Consensus (7537)							
Section 159							
	(7585)	7585	7590	7600	7610	7620	7632
ClareAJ251507	(6600)	-----					
huNalII18 (AK)	(6090)	-----					
JeongAF225987	(7585)	ATTTTACTCAATCCATTCTTCACAAGTCTTGGTTAAAGAATGTCACAT					
Consensus (7585)							
Section 160							
	(7633)	7633	7640	7650	7660	7670	7680
ClareAJ251507	(6600)	-----					
huNalII18 (AK)	(6090)	-----					
JeongAF225987	(7633)	ATTGGTGATAGAATGAATTCAACCTGCTCTGTCCATTATGTCAAGCAG					
Consensus (7633)							
Section 161							
	(7681)	7681	7690	7700	7710		7728
ClareAJ251507	(6600)	-----					
huNalII18 (AK)	(6090)	-----					
JeongAF225987	(7681)	AATAATTGAAAGCTATTACAAACACCTTACTTTGCACTTTAATT					
Consensus (7681)							

Section 162						
(7729)	<u>7729</u>	7740	7750	7760	7776	
ClareAJ251507 (6600)	-----					
huNall18 (AK) (6090)	-----					
JeongAF225987	(7729)	CAACATGAGTATCATATGGTATCTCTCTGGATTCAAGGAAACACACT				
Consensus	(7729)					
Section 163						
(7777)	<u>7777</u>	7790	7800	7810	7824	
ClareAJ251507 (6600)	-----					
huNall18 (AK) (6090)	-----					
JeongAF225987	(7777)	GGATACTGCCTACTGACAAAACCTATTCTTCATATTTGCTAAAAATA				
Consensus	(7777)					
Section 164						
(7825)	<u>7825</u>	7830	7840	7850	7860	7872
ClareAJ251507 (6600)	-----					
huNall18 (AK) (6090)	-----					
JeongAF225987	(7825)	TGTCTAAAAC TTGTTAAATATAAATAATGTAAAAATATAATCAACTT				
Consensus	(7825)					
Section 165						
(7873)	<u>7873</u>	7880	7890	7900	7910	7920
ClareAJ251507 (6600)	-----					
huNall18 (AK) (6090)	-----					
JeongAF225987	(7873)	TATTTGTCAGCATTGTACATAAGAAAATTATTCAGGTTGATGAC				
Consensus	(7873)					
Section 166						
(7921)	<u>7921</u>	7930	7940	7950	7968	
ClareAJ251507 (6600)	-----					
huNall18 (AK) (6090)	-----					
JeongAF225987	(7921)	ATCACAAATT TATTTACTTTATGCTTTGCTTTGATTAAATCACA				
Consensus	(7921)					
Section 167						
(7969)	<u>7969</u>	7980	7990	8000	8016	
ClareAJ251507 (6600)	-----					
huNall18 (AK) (6090)	-----					
JeongAF225987	(7969)	ATTC CAAACTTTGAATCCATAAGATTTCAATGGATAATT CCTAA				
Consensus	(7969)					
Section 168						
(8017)	<u>8017</u>	8030	8040	8050	8064	
ClareAJ251507 (6600)	-----					
huNall18 (AK) (6090)	-----					
JeongAF225987	(8017)	AATAAAAGTTAGATAATGGGTTTATGGATTCTTGTTATAATATAT				
Consensus	(8017)					

Section 169						
	(8065)	8065	8070	8080	8090	8100
ClareAJ251507 (6600)						8112
huNalll18 (AK) (6090)						
JeongAF225987 (8065)	TTTCTACCATTCCAATAGGAGATACATTGGTCAAACACTCAAACCTAG					
Consensus (8065)						
Section 170						
	(8113)	8113	8120	8130	8140	8150
ClareAJ251507 (6600)						8160
huNalll18 (AK) (6090)						
JeongAF225987 (8113)	ATCATTCTACCAACTATGGTTGCCTCAATATAACCTTTATTCTATA					
Consensus (8113)						
Section 171						
	(8161)	8161	8170	8180	8190	8208
ClareAJ251507 (6600)						
huNalll18 (AK) (6090)						
JeongAF225987 (8161)	GATGTTTTTTTATTCAACTTTGTAGTATTACGTATGCAGACTAG					
Consensus (8161)						
Section 172						
	(8209)	8209	8220	8230	8240	8256
ClareAJ251507 (6600)						
huNalll18 (AK) (6090)						
JeongAF225987 (8209)	TCTTATTCCCCATTCTGCTGCACTAAAGCTATTACAAATATAACA					
Consensus (8209)						
Section 173						
	(8257)	8257	8270	8280	8290	8304
ClareAJ251507 (6600)						
huNalll18 (AK) (6090)						
JeongAF225987 (8257)	TGGACTTTGTTCTTTTAGCCATGAACAAAGTGGCAAAGTTGTGCAAT					
Consensus (8257)						
Section 174						
	(8305)	8305	8310	8320	8330	8340
ClareAJ251507 (6600)						8352
huNalll18 (AK) (6090)						
JeongAF225987 (8305)	TACCTAACATGATATAAATTTGTTTTGCACAAACCAAAAGTTA					
Consensus (8305)						
Section 175						
	(8353)	8353	8360	8370	8380	8390
ClareAJ251507 (6600)						8400
huNalll18 (AK) (6090)						
JeongAF225987 (8353)	ATGTTAATTCTTTACAAAACATTACTGTAGTGTATTGAAGAACT					
Consensus (8353)						

Section 176					
(8401)	8401	8410	8420	8430	8448
ClareAJ251507 (6600)	-----				
huNalll18 (AK) (6090)	-----				
JeongAF225987	(8401)	GCATGCAGGGATTGCTATTGCTAAAAAGAATGGTGAGCTACGTCATT			
Consensus (8401)					
Section 177					
(8449)	8449	8460	8470	8480	8496
ClareAJ251507 (6600)	-----				
huNalll18 (AK) (6090)	-----				
JeongAF225987	(8449)	ATTGAGCCAAAAGAATAAAATTCATTTTATTGCATTCACTTATTG			
Consensus (8449)					
Section 178					
(8497)	8497	8510	8520	8530	8544
ClareAJ251507 (6600)	-----				
huNalll18 (AK) (6090)	-----				
JeongAF225987	(8497)	GGCTCTGGGGTTTTGTTTTGCTGTTGGCAGTTAAAAT			
Consensus (8497)					
Section 179					
(8545)	8545	8550	8560	8570	8580
ClareAJ251507 (6600)	-----				
huNalll18 (AK) (6090)	-----				
JeongAF225987	(8545)	ATATATAATTAATAAAACCTGTGCTGATCTGACATTGTATACATAA			
Consensus (8545)					
Section 180					
(8593)	8593	8600	8610	8620	8630
ClareAJ251507 (6600)	-----				
huNalll18 (AK) (6090)	-----				
JeongAF225987	(8593)	AAGTTTACATGAATTACAAACAAACTAGTGCATGATTCAACCAAGCAG			
Consensus (8593)					
Section 181					
(8641)	8641	8650	8660	8670	8688
ClareAJ251507 (6600)	-----				
huNalll18 (AK) (6090)	-----				
JeongAF225987	(8641)	TACTACAGAACAAAGCAAATTAAAAGCAGCTTGTGAACTTTATGT			
Consensus (8641)					
Section 182					
(8689)	8689	8700	8710	8720	8736
ClareAJ251507 (6600)	-----				
huNalll18 (AK) (6090)	-----				
JeongAF225987	(8689)	GTGCAAAGGATCAAGTTCACATGTTCCAACTTCAAGGTTGATAATAA			
Consensus (8689)					

						Section 183
(8737)	8737		8750	8760	8770	8784
ClareAJ251507	(6600)	-----				
huNalll18 (AK)	(6090)	-----				
JeongAF225987	(8737)	TAGTAGTAACCACCTACAATAGCTTCATAATTCAACTCCCTTGG				
Consensus (8737)						
						Section 184
(8785)	8785	8790	8800	8810	8820	8832
ClareAJ251507	(6600)	-----				
huNalll18 (AK)	(6090)	-----				
JeongAF225987	(8785)	CTATAAGCATCTAAACTCATCTTCTTCAATATAATTGATGCTATCTC				
Consensus (8785)						
						Section 185
(8833)	8833	8840	8850	8860	8870	8880
ClareAJ251507	(6600)	-----				
huNalll18 (AK)	(6090)	-----				
JeongAF225987	(8833)	CTAATTACTTGGTGGCTAATAATGTTACATTCTTGTACTAAATG				
Consensus (8833)						
						Section 186
(8881)	8881		8890	8900	8910	8928
ClareAJ251507	(6600)	-----				
huNalll18 (AK)	(6090)	-----				
JeongAF225987	(8881)	CATTATATAAACTCCTATGTATACATAAGGTATTAATGATATAGTTAT				
Consensus (8881)						
						Section 187
(8929)	8929		8940	8950	8960	8976
ClareAJ251507	(6600)	-----				
huNalll18 (AK)	(6090)	-----				
JeongAF225987	(8929)	TGAGAATTATATTAACCTTTTTCAAGAACCCCTGGATTTATGTGA				
Consensus (8929)						
						Section 188
(8977)	8977		8990	9000	9010	9024
ClareAJ251507	(6600)	-----				
huNalll18 (AK)	(6090)	-----				
JeongAF225987	(8977)	GGTCAAAACCAAACCTTATTCTCAGTGAAAATCCAGTTGTAATGC				
Consensus (8977)						
						Section 189
(9025)	9025	9030		9040	9050	9060
ClareAJ251507	(6600)	-----				
huNalll18 (AK)	(6090)	-----				
JeongAF225987	(9025)	ATATTTTAAAGACAATTGGATCTAAATATGTATTCTATAATTCTCC				
Consensus (9025)						

Section 190

(9073)	9073	9080	9090	9100	9110	9120
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ClareAJ251507 (6600) -----

huNalII18 (AK) (6090) -----

JeongAF225987 (9073) CATAATAAATTATATAAGGTGGAAAAAAAAAAAAAAA
Consensus (9073)

Section 191

(9121)	<u>9123</u>
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ClareAJ251507 (6600) ---

huNalII18 (AK) (6090) ---

JeongAF225987 (9121) AAA
Consensus (9121)

	Section 1					
ClareAJ251507protein	(1) 1	10	20	30	40	
Translation of huNalII18 (AK)	(1) MAQALLVPPGPESFRLFTRESLAAIEKRAAEEKAKKPKE					
Translation of JeongAF225987	(1) MAQALLVPPGPESFRLFTRESLAAIEKRAAEEKAKKPKE					
Consensus	(1) MAQALLVPPGPESFRLFTRESLAAIEKRAAEEKAKKPKE					
	Section 2					
ClareAJ251507protein	(41) 41	50	60	70	80	
Translation of huNalII18 (AK)	(41) QDNDDENPKPKPNSDLEAGKNLPFIYGDI PPEMVSEPLEDL					
Translation of JeongAF225987	(41) QDNDDENPKPKPNSDLEAGKNLPFIYGDI PPEMVSEPLEDL					
Consensus	(41) QDNDDENPKPKPNSDLEAGKNLPFIYGDI PPEMVSEPLEDL					
	Section 3					
ClareAJ251507protein	(81) 81	90	100	110	120	
Translation of huNalII18 (AK)	(81) DPYYINKKTFIVMNKGKAIFRFSATSALYILTPLNPVRKI					
Translation of JeongAF225987	(81) DPYYINKKTFIVMNKGKAIFRFSATSALYILTPLNPVRKI					
Consensus	(81) DPYYINKKTFIVMNKGKAIFRFSATSALYILTPLNPVRKI					
	Section 4					
ClareAJ251507protein	(121) 121	130	140	150	160	
Translation of huNalII18 (AK)	(121) AIKILVHSLFSQLIMCTILTNCVFMTLSNPPDWTKNVEYT					
Translation of JeongAF225987	(121) AIKILVHSLFSQLIMCTILTNCVFMTLSNPPDWTKNVEYT					
Consensus	(121) AIKILVHSLFSQLIMCTILTNCVFMTLSNPPDWTKNVEYT					
	Section 5					
ClareAJ251507protein	(161) 161	170	180	190	200	
Translation of huNalII18 (AK)	(161) FTGIYTFESLIKILARGFCLEDFTFLRDPWNWLDFSVIVM					
Translation of JeongAF225987	(161) FTGIYTFESLIKILARGFCLEDFTFLRDPWNWLDFSVIVM					
Consensus	(161) FTGIYTFESLIKILARGFCLEDFTFLRDPWNWLDFSVIVM					
	Section 6					
ClareAJ251507protein	(201) 201	210	220	230	240	
Translation of huNalII18 (AK)	(201) AYVTEFVSLGNVSALRTFRVLRAKTI SVIPGLKTIVGAL					
Translation of JeongAF225987	(201) AYVTEFVSLGNVSALRTFRVLRAKTI SVIPGLKTIVGAL					
Consensus	(201) AYVTEFVSLGNVSALRTFRVLRAKTI SVIPGLKTIVGAL					
	Section 7					
ClareAJ251507protein	(241) 241	250	260	270	280	
Translation of huNalII18 (AK)	(241) IQSVKKLSDVMILTVFCLSVFALIGLQLFMGNLRNKCLQW					
Translation of JeongAF225987	(241) IQSVKKLSDVMILTVFCLSVFALIGLQLFMGNLRNKCLQW					
Consensus	(241) IQSVKKLSDVMILTVFCLSVFALIGLQLFMGNLRNKCLQW					

Section 8					
ClareAJ251507protein	(281) 281	290	300	310	320
Translation of huNallI18 (AK)	(281) PPSDSAFE <u>TNTTSYFNGTMDNSNGTFVNVTMSTFNWKDYIG</u>				
Translation of JeongAF225987	(281) PPSDSAFE <u>TNTTSYFNGTMDNSNGTFVNVTMSTFNWKDYIG</u>				
Consensus	(281) PPSDSAFE <u>TNTTSYFNGTMDNSNGTFVNVTMSTFNWKDYIG</u>				
Section 9					
ClareAJ251507protein	(321) 321	330	340	350	360
Translation of huNallI18 (AK)	(321) DDSHFVLDGQKDPLL <u>CGNGSDAGQCPEGYICVKAGRNP</u>				
Translation of JeongAF225987	(321) DDSHFVLDGQKDPLL <u>CGNGSDAGQCPEGYICVKAGRNP</u>				
Consensus	(321) DDSHFVLDGQKDPLL <u>CGNGSDAGQCPEGYICVKAGRNP</u>				
Section 10					
ClareAJ251507protein	(361) 361	370	380	390	400
Translation of huNallI18 (AK)	(361) YGYTSFD <u>TFSWAFLSLFRLMTQDYWENLYQLTLRAAGKTY</u>				
Translation of JeongAF225987	(361) YGYTSFD <u>TFSWAFLSLFRLMTQDYWENLYQLTLRAAGKTY</u>				
Consensus	(361) YGYTSFD <u>TFSWAFLSLFRLMTQDYWENLYQLTLRAAGKTY</u>				
Section 11					
ClareAJ251507protein	(401) 401	410	420	430	440
Translation of huNallI18 (AK)	(401) MIFFVLVIFLGSFYLVLNL <u>LAVVAMAYEEQNQATLEEAEQ</u>				
Translation of JeongAF225987	(401) MIFFVLVIFLGSFYLVLNL <u>LAVVAMAYEEQNQATLEEAEQ</u>				
Consensus	(401) MIFFVLVIFLGSFYLVLNL <u>LAVVAMAYEEQNQATLEEAEQ</u>				
Section 12					
ClareAJ251507protein	(441) 441	450	460	470	480
Translation of huNallI18 (AK)	(441) KEAEFQQMLEQLKKQQEEAQAVAAASAASRDFSG <u>GIGGLGE</u>				
Translation of JeongAF225987	(441) KEAEFQQMLEQLKKQQEEAQAVAAASAASRDFSG <u>GIGGLGE</u>				
Consensus	(441) KEAEFQQMLEQLKKQQEEAQAVAAASAASRDFSG <u>GIGGLGE</u>				
Section 13					
ClareAJ251507protein	(481) 481	490	500	510	520
Translation of huNallI18 (AK)	(481) LLESSSEASKLSSKSAKEWRNRRKKR <u>QREHLEGNNKGER</u>				
Translation of JeongAF225987	(481) LLESSSEASKLSSKSAKEWRNRRKKR <u>QREHLEGNNKGER</u>				
Consensus	(481) LLESSSEASKLSSKSAKEWRNRRKKR <u>QREHLEGNNKGER</u>				
Section 14					
ClareAJ251507protein	(521) 521	530	540	550	560
Translation of huNallI18 (AK)	(521) DSFPKSESED <u>SVKRSSFLFSMDGNRLTSDKKFCSPHQSL</u>				
Translation of JeongAF225987	(521) DSFPKSESED <u>SVKRSSFLFSMDGNRLTSDKKFCSPHQSL</u>				
Consensus	(521) DSFPKSESED <u>SVKRSSFLFSMDGNRLTSDKKFCSPHQSL</u>				

	Section 15				
ClareAJ251507protein	(561) 561	570	580	590	600
Translation of huNaill18 (AK)	(561) SIRGSLFSPRRNSKTSIFSFRGRAKDVGSENDFADDEHST				
Translation of JeongAF225987	(561) SIRGSLFSPRRNSKTSIFSFRGRAKDVGSENDFADDEHST				
Consensus	(561) SIRGSLFSPRRNSKTSIFSFRGRAKDVGSENDFADDEHST				
	Section 16				
ClareAJ251507protein	(601) 601	610	620	630	640
Translation of huNaill18 (AK)	(601) FEDSESRRDSLFPVPHRGERRNS-----				
Translation of JeongAF225987	(601) FEDSESRRDSLFPVPHRGERRNSNVSQASMSSRMVPGLPA				
Consensus	(601) FEDGESRRDSLFPVPHRGERRNSNVSQASMSSSRMVPGLPA				
	Section 17				
ClareAJ251507protein	(641) 641	650	660	670	680
Translation of huNaill18 (AK)	(624) -----NGTTTETE				
Translation of JeongAF225987	(641) NGKMHSTVDCNGVVSLVGGPSALTSPTGQLPPEGTTTETE				
Consensus	(641) NGKMHSTVDCNGVVSLVGGPSALTSPTGQLPPEGTTTETE				
	Section 18				
ClareAJ251507protein	(681) 681	690	700	710	720
Translation of huNaill18 (AK)	(632) VRKRRLSSYQISMEMLEDSSGRQRAVSIAISILTNTMEELE				
Translation of JeongAF225987	(681) VRKRRLSSYQISMEMLEDSSGRQRAVSIAISILTNTMEELE				
Consensus	(681) VRKRRLSSYQISMEMLEDSSGRQRAVSIAISILTNTMEELE				
	Section 19				
ClareAJ251507protein	(721) 721	730	740	750	760
Translation of huNaill18 (AK)	(672) ESRQKCPPCWYRFANVFLIWDCDAWLKVKHVLVNLIVMDP				
Translation of JeongAF225987	(721) ESRQKCPPCWYRFANVFLIWDCDAWLKVKHVLVNLIVMDP				
Consensus	(721) ESRQKCPPCWYRFANVFLIWDCDAWLKVKHVLVNLIVMDP				
	Section 20				
ClareAJ251507protein	(761) 761	770	780	790	800
Translation of huNaill18 (AK)	(712) FVDLAITICIVLNTLFMAMEHYPMTEQFSSVLTVGNLVFT				
Translation of JeongAF225987	(761) FVDLAITICIVLNTLFMAMEHYPMTEQFSSVLTVGNLVFT				
Consensus	(761) FVDLAITICIVLNTLFMAMEHYPMTEQFSSVLTVGNLVFT				
	Section 21				
ClareAJ251507protein	(801) 801	810	820	830	840
Translation of huNaill18 (AK)	(752) GIFTAEMVLKIIAMDYYYYFQEGWNIFDGIIVSLSLMELG				
Translation of JeongAF225987	(801) GIFTAEMVLKIIAMDYYYYFQEGWNIFDGIIVSLSLMELG				
Consensus	(801) GIFTAEMVLKIIAMDYYYYFQEGWNIFDGIIVSLSLMELG				

Section 22					
ClareAJ251507protein	(841) 841	850	860	870	880
Translation of huNallI18 (AK)	(792) LSNVEGLSVLRSFRLLRVFKLAKSWPTLNMLIKIIGNSVG				
Translation of JeongAF225987	(841) LSNVEGLSVLRSFRLLRVFKLAKSWPTLNMLIKIIGNSVG				
Consensus	(841) LSNVEGLSVLRSFRLLRVFKLAKSWPTLNMLIKIIGNSVG				
Section 23					
ClareAJ251507protein	(881) 881	890	900	910	920
Translation of huNallI18 (AK)	(832) ALGNLTFLVLAIIIVFIFAVVGMQLFGKSYKECVCKINDDCT				
Translation of JeongAF225987	(881) ALGNLTFLVLAIIIVFIFAVVGMQLFGKSYKECVCKINDDCT				
Consensus	(881) ALGNLTFLVLAIIIVFIFAVVGMQLFGKSYKECVCKINDDCT				
Section 24					
ClareAJ251507protein	(921) 921	930	940	950	960
Translation of huNallI18 (AK)	(872) LPRWHMNDFFHSFLIVFRVLCGEWIETMWDCMEVAGQTMC				
Translation of JeongAF225987	(921) LPRWHMNDFFHSFLIVFRVLCGEWIETMWDCMEVAGQTMC				
Consensus	(921) LPRWHMNDFFHSFLIVFRVLCGEWIETMWDCMEVAGQTMC				
Section 25					
ClareAJ251507protein	(961) 961	970	980	990	1000
Translation of huNallI18 (AK)	(912) LIVFMLVMVIGNLVVLNLFLALLLSSFS SDNLAATDDDNE				
Translation of JeongAF225987	(961) LIVFMLVMVIGNLVVLNLFLALLLSSFS SDNLAATDDDNE				
Consensus	(961) LIVFMLVMVIGNLVVLNLFLALLLSSFS SDNLAATDDDNE				
Section 26					
ClareAJ251507protein	(1001) 1001	1010	1020	1030	1040
Translation of huNallI18 (AK)	(952) MNNLQIAVGRMQKGIDYVKNMRECFQKAFFRKPKVIEIH				
Translation of JeongAF225987	(1001) MNNLQIAVGRMQKGIDYVKNMRECFQKAFFRKPKVIEIH				
Consensus	(1001) MNNLQIAVGRMQKGIDYVKNMRECFQKAFFRKPKVIEIH				
Section 27					
ClareAJ251507protein	(1041) 1041	1050	1060	1070	1080
Translation of huNallI18 (AK)	(992) EGNKIDSCMSNNTGIEISKELNYLRDGNGTTSGVGTGSSV				
Translation of JeongAF225987	(1041) EGNKIDSCMSNNTGIEISKELNYLRDGNGTTSGVGTGSSV				
Consensus	(1041) EGNKIDSCMSNNTGIEISKELNYLRDGNGTTSGVGTGSSV				
Section 28					
ClareAJ251507protein	(1081) 1081	1090	1100	1110	1120
Translation of huNallI18 (AK)	(1032) EKYVIDENDYMSFINNPSLT VTVPIAVGESDFENLNT EEF				
Translation of JeongAF225987	(1081) EKYVIDENDYMSFINNPSLT VTVPIAVGESDFENLNT EEF				
Consensus	(1081) EKYVIDENDYMSFINNPSLT VTVPIAVGESDFENLNT EEF				

Section 29					
	(1121) 1121	1130	1140	1150	1160
ClareAJ251507protein	(1072) SSESELEESKEKLNATSSSEGSTVDVVLPREGEQAETEPE				
Translation of huNalll18 (AK)	(1121) SSESELEESKEKLNATSSSEGSTVDVVLPREGEQAETEPE				
Translation of JeongAF225987	(1121) SSESELEESKEKLNATSSSEGSTVDVVLPREGEQAETEPE				
Consensus	(1121) SSESELEESKEKLNATSSSEGSTVDVVLPREGEQAETEPE				
Section 30					
	(1161) 1161	1170	1180	1190	1200
ClareAJ251507protein	(1112) EDLKPEACFTEGC I KKFPFCQVSTE E GKGIWWNLRLKTCY				
Translation of huNalll18 (AK)	(1161) EDLKPEACFTEGC I KKFPFCQVSTE E GKGIWWNLRLKTCY				
Translation of JeongAF225987	(1161) EDFKPEACFTEGC I KKFPFCQVSTE E GKGIWWNLRLKTCY				
Consensus	(1161) EDLKPEACFTEGC I KKFPFCQVSTE E GKGIWWNLRLKTCY				
Section 31					
	(1201) 1201	1210	1220	1230	1240
ClareAJ251507protein	(1152) SIVEHNWFETFIVFMILLSSGALAFEDIYIEQRKTIKTML				
Translation of huNalll18 (AK)	(1201) SIVEHNWFETFIVFMILLSSGALAFEDIYIEQRKTIKTML				
Translation of JeongAF225987	(1201) SIVEHNWFETFIVFMILLSSGALAFEDIYIEQRKTIKTML				
Consensus	(1201) SIVEHNWFETFIVFMILLSSGALAFEDIYIEQRKTIKTML				
Section 32					
	(1241) 1241	1250	1260	1270	1280
ClareAJ251507protein	(1192) EYADKVFTYIFILEMLLKWVAYGFQTYFTNAWCWLDFLIV				
Translation of huNalll18 (AK)	(1241) EYADKVFTYIFILEMLLKWVAYGFQTYFTNAWCWLDFLIV				
Translation of JeongAF225987	(1241) EYADKVFTYIFILEMLLKWVAYGFQTYFTNAWCWLDFLIV				
Consensus	(1241) EYADKVFTYIFILEMLLKWVAYGFQTYFTNAWCWLDFLIV				
Section 33					
	(1281) 1281	1290	1300	1310	1320
ClareAJ251507protein	(1232) DVSLVSLVANALGYSELGAIKSLRTLRALRPLRALSRFEG				
Translation of huNalll18 (AK)	(1281) DVSLVSLVANALGYSELGAIKSLRTLRALRPLRALSRFEG				
Translation of JeongAF225987	(1281) DVSLVSLVANALGYSELGAIKSLRTLRALRPLRALSRFEG				
Consensus	(1281) DVSLVSLVANALGYSELGAIKSLRTLRALRPLRALSRFEG				
Section 34					
	(1321) 1321	1330	1340	1350	1360
ClareAJ251507protein	(1272) MRVVVNALVGAIPSIMNVLLVCLIFWLIFSIMGVNLFLAGK				
Translation of huNalll18 (AK)	(1321) MRVVVNALVGAIPSIMNVLLVCLIFWLIFSIMGVNLFLAGK				
Translation of JeongAF225987	(1321) MRVVVNALVGAIPSIMNVLLVCLIFWLIFSIMGVNLFLAGK				
Consensus	(1321) MRVVVNALVGAIPSIMNVLLVCLIFWLIFSIMGVNLFLAGK				
Section 35					
	(1361) 1361	1370	1380	1390	1400
ClareAJ251507protein	(1312) FYHCVNMTTGNMFDISDVNNLSDCQALGKQARWKNVKVNF				
Translation of huNalll18 (AK)	(1361) FYHCVNMTTGNMFDISDVNNLSDCQALGKQARWKNVKVNF				
Translation of JeongAF225987	(1361) FYHCVNMTTGNMFDISDVNNLSDCQALGKQARWKNVKVNF				
Consensus	(1361) FYHCVNMTTGNMFDISDVNNLSDCQALGKQARWKNVKVNF				

Section 36

(1401) 1401 1410 1420 1430 1440

ClareAJ251507protein (1352) DNVGAGYLALLQVATFKGWMDIMYAAVDSRDVKLQPVYEE

Translation of huNallI18 (AK) (1401) DNVGAGYLALLQVATFKGWMDIMYAAVDSRDVKLQPVYEE

Translation of JeongAF225987 (1401) DNVGAGYLALLQVATFKGWMDIMYAAVDSRDVKLQPVYEE

Consensus (1401) DNVGAGYLALLQVATFKGWMDIMYAAVDSRDVKLQPVYEE

Section 37

(1441) 1441 1450 1460 1470 1480

ClareAJ251507protein (1392) NLYMYLYFVIFIIFGSFFTTLNLFIGVIIDNFNQQKKKFGG

Translation of huNallI18 (AK) (1441) NLYMYLYFVIFIIFGSFFTTLNLFIGVIIDNFNQQKKKFGG

Translation of JeongAF225987 (1441) NLYMYLYFVIFIIFGSFFTTLNLFIGVIIDNFNQQKKKFGG

Consensus (1441) NLYMYLYFVIFIIFGSFFTTLNLFIGVIIDNFNQQKKKFGG

Section 38

(1481) 1481 1490 1500 1510 1520

ClareAJ251507protein (1432) QDIFMTEEQKKYYNAMKLGSKPKQKPIPRPANKFQGMVF

Translation of huNallI18 (AK) (1481) QDIFMTEEQKKYYNAMKLGSKPKQKPIPRPANKFQGMVF

Translation of JeongAF225987 (1481) QDIFMTEEQKKYYNAMKLGSKPKQKPIPRPANKFQGMVF

Consensus (1481) QDIFMTEEQKKYYNAMKLGSKPKQKPIPRPANKFQGMVF

Section 39

(1521) 1521 1530 1540 1550 1560

ClareAJ251507protein (1472) DFVTRQVFDISIMILICLNMTMMVETDDQGKYMTLVLSR

Translation of huNallI18 (AK) (1521) DFVTRQVFDISIMILICLNMTMMVETDDQGKYMTLVLSR

Translation of JeongAF225987 (1521) DFVTRQVFDISIMILICLNMTMMVETDDQGKYMTLVLSR

Consensus (1521) DFVTRQVFDISIMILICLNMTMMVETDDQGKYMTLVLSR

Section 40

(1561) 1561 1570 1580 1590 1600

ClareAJ251507protein (1512) INLVFIVLFTGEFVLKLVSLRHYYFTIGWNIFDFVVVILS

Translation of huNallI18 (AK) (1561) INLVFIVLFTGEFVLKLVSLRHYYFTIGWNIFDFVVVILS

Translation of JeongAF225987 (1561) INLVFIVLFTGEFVLKLVSLRHYYFTIGWNIFDFVVVILS

Consensus (1561) INLVFIVLFTGEFVLKLVSLRHYYFTIGWNIFDFVVVILS

Section 41

(1601) 1601 1610 1620 1630 1640

ClareAJ251507protein (1552) IVGMFLAEMIEKYFVSPTLFRVIRLARIGRILRLIKGAKG

Translation of huNallI18 (AK) (1601) IVGMFLAEMIEKYFVSPTLFRVIRLARIGRILRLIKGAKG

Translation of JeongAF225987 (1601) IVGMFLAEMIEKYFVSPTLFRVIRLARIGRILRLIKGAKG

Consensus (1601) IVGMFLAEMIEKYFVSPTLFRVIRLARIGRILRLIKGAKG

Section 42

(1641) 1641 1650 1660 1670 1680

ClareAJ251507protein (1592) IRTLLFALMMSLPALFNIGLLLFLVMFIYAIFGMSNFAYV

Translation of huNallI18 (AK) (1641) IRTLLFALMMSLPALFNIGLLLFLVMFIYAIFGMSNFAYV

Translation of JeongAF225987 (1641) IRTLLFALMMSLPALFNIGLLLFLVMFIYAIFGMSNFAYV

Consensus (1641) IRTLLFALMMSLPALFNIGLLLFLVMFIYAIFGMSNFAYV

Section 43

(1681) 1681	1690	1700	1710	1720
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ClareAJ251507protein (1632) KKEAGIDDMFNFETFGNSMICLQITTSAGWDGLLAPILN

Translation of huNalll18 (AK) (1681) KKEAGIDDMFNFETFGNSMICLQITTSAGWDGLLAPILN

Translation of JeongAF225987 (1681) KKEAGIDDMFNFETFGNSMICLQITTSAGWDGLLAPILN

Consensus (1681) KKEAGIDDMFNFETFGNSMICLQITTSAGWDGLLAPILN

Section 44

(1721) 1721	1730	1740	1750	1760
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ClareAJ251507protein (1672) SAPPDCDPDTIHPGSSVKGDCGNPSVGIFFFVSYIIISFL

Translation of huNalll18 (AK) (1721) SAPPDCDPDTIHPGSSVKGDCGNPSVGIFFFVSYIIISFL

Translation of JeongAF225987 (1721) SAPPDCDPDTIHPGSSVKGDRGDPVGIFFFVSYIIISFL

Consensus (1721) SAPPDCDPDTIHPGSSVKGDCGNPSVGIFFFVSYIIISFL

Section 45

(1761) 1761	1770	1780	1790	1800
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ClareAJ251507protein (1712) VVVNMYIAVILENFVATEESAEPSEDDFEMFYEVWEKF

Translation of huNalll18 (AK) (1761) VVVNMYIAVILENFVATEESAEPSEDDFEMFYEVWEKF

Translation of JeongAF225987 (1761) VVVNMYIAVILENFVATEESAEPSEDDFEMFYEVWEKF

Consensus (1761) VVVNMYIAVILENFVATEESAEPSEDDFEMFYEVWEKF

Section 46

(1801) 1801	1810	1820	1830	1840
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ClareAJ251507protein (1752) DPDATQFIEFSKLSDFAAALDPPLIAKPNKVQLIAMDLP

Translation of huNalll18 (AK) (1801) DPDATQFIEFSKLSDFAAALDPPLIAKPNKVQLIAMDLP

Translation of JeongAF225987 (1801) DPDATQFIEFSKLSDFAAALDPPLIAKPNKVQLIAMDLP

Consensus (1801) DPDATQFIEFSKLSDFAAALDPPLIAKPNKVQLIAMDLP

Section 47

(1841) 1841	1850	1860	1870	1880
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ClareAJ251507protein (1792) MVSGDRIHCLDILFAFTKRLGESGEMDALRIQMEDRFMA

Translation of huNalll18 (AK) (1841) MVSGDRIHCLDILFAFTKRLGESGEMDALRIQMEDRFMA

Translation of JeongAF225987 (1841) MVSGDRIHCLDILFAFTKRLCESGEMDALRIQMEDRFMA

Consensus (1841) MVSGDRIHCLDILFAFTKRLGESGEMDALRIQMEDRFMA

Section 48

(1881) 1881	1890	1900	1910	1920
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ClareAJ251507protein (1832) SNPSKVSYEPITTLKRKQEEVSAIIQRNFR CYLLKQRL

Translation of huNalll18 (AK) (1881) SNPSKVSYEPITTLKRKQEEVSAIIQRNFR CYLLKQRL

Translation of JeongAF225987 (1881) SNPSKVSYEPITTLKRKQEEVSAIIQRNFR CYLLKQRL

Consensus (1881) SNPSKVSYEPITTLKRKQEEVSAIIQRNFR CYLLKQRL

Section 49

(1921) 1921	1930	1940	1950	1960
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ClareAJ251507protein (1872) KNISSNYNKEAIKG RIDLPIKQDMIIDKLNGNSTPEKTDG

Translation of huNalll18 (AK) (1921) KNISSNYNKEAIKG RIDLPIKQDMIIDKLNGNSTPEKTDG

Translation of JeongAF225987 (1921) KNISSNYNKEAIKG RIDLPIKQDMIIDKLNGNSTPEKTDG

Consensus (1921) KNISSNYNKEAIKG RIDLPIKQDMIIDKLNGNSTPEKTDG

	Section 50					
	(1961)	1961	1970	1980	1990	2000
ClareAJ251507protein	(1912)	SSSTT\$PPSYDSVTKPDKEKFEKDKPEKESKGKEVRENQK				
Translation of huNalll18 (AK)	(1961)	SSSTT\$PPSYDSVTKPDKEKFEKDKPEKESKGKEVRENQK				
Translation of JeongAF225987	(1961)	SSSTTPPPSYDSVTKPDKEKFEKDKPEKESKGKEVRENQK				
Consensus	(1961)	SSSTTSPPSYDSVTKPDKEKFEKDKPEKESKGKEVRENQK				

